New Edition

Population and Planned Parenthood in India

Foreword by Nehru

roduction by
lian Huxley

S. Chandrasekhar

The Macmillan Company

POPULATION AND PLANNED PARENTHOOD IN INDIA

BY S. CHANDRASEKHAR

INFANT MORTALITY IN INDIA, 1901-1955

CHINA'S POPULATION: CENSUS AND VITAL STATISTICS

HUNGRY PEOPLE AND EMPTY LANDS

Population and Planned Parenthood in India

BY

S. CHANDRASEKHAR

Director, Indian Institute for Population Studies, Madras

FOREWORD BY
JAWAHARLAL NEHRU

INTRODUCTION BY SIR JULIAN HUXLEY, F.R.S.

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To the Mothers of India
who suffer from improvident maternity

FOREWORD BY
JAWAHARLAL NEHRU

I am glad to commend this book by Dr S. Chandrasekhar who has made a special study of the subject of family planning and birth control in India. During the past few years this subject has attracted special attention in India, as it has in a great part of the world. The Government of India and our Planning Commission have given it priority in our various Plan schemes. The general response to our efforts, though slow from the point of view of India's population, has been sound. Fortunately there is no major organized group in India opposed to family planning although there are many individuals who disapprove of it. There is thus no political obstruction to any steps that we might take, such as exists in some countries. The atmosphere is generally favourable to it. The real difficulty comes from the economic and educational backwardness of the people and the fact that we have to deal with a population which is already over four hundred million.

The actual rate of increase in the population has gone up considerably and rather alarmingly. I believe that the latest figure of annual rate of increase is nearly 1.9 per cent. This increase in rate is chiefly due to the improvement in the nation's health and the rapidly decreasing death rate. Malaria, which affected millions of our people, has been eradicated from great parts of India. Child mortality has gone down very considerably. The average expectation of life in India, which used to be about thirty, is now, I believe, forty-two. Thus the advance we are making in various fields is leading to a higher survival rate and a bigger population.

Previously frequent famines took a heavy toll, apart from disease. We have continued to have floods and drought and other natural calamities and they have caused much suffering. But people do not die from famine conditions now although many of them are under-nourished for a period. The per capita consumption of food has gone up considerably and even a casual look at a village crowd shows that they are better fed and better clothed than they used to be.

All this leads to a higher rate of survival and this will no doubt continue for some time till it balances itself with other factors and stabilizes at a lower rate of increase.

Meanwhile we have to deal with this tremendous problem and every delay in controlling it makes it more difficult of solution and at the same time comes in the way of the higher standards for our people that we seek to attain. We are naturally anxious to do all we can in this matter. And yet I do not agree with those who suggest that we should attach even more importance to population control than to economic growth. There is no conflict between the two and we have, therefore, to proceed on both lines. I am sure, however, that economic growth is essential even from the point of view of birth control. An increase in the standard of living of the people will help in reducing the rate of population increase. Unless this economic growth comes soon, our problems become more difficult and tend to overwhelm us. We have thus to consider the problems of India as a whole and that is the attempt that our Planning Commission is making. Without rapid improvement in agriculture and industrial growth, there is little hope for the future. As that growth comes, and there is widespread education, family planning accompanies it.

It is true that India's population is huge and is increasing at a rapid rate. It is not that India, taken as a whole, is very heavily populated. Even now it is largely the Gangetic area and part of the south of India that can be said to be heavily populated. There are vast tracts in India where the population is sparse. But, taken as a whole, the pressure of population is undoubtedly great and burdensome. Every problem that we have has to be multiplied by four hundred million. We have to run a race against time, whether it is on the economic front or in regard to population. I think we shall win on both fronts. But we shall have to work hard.

Dr Chandrasekhar's book explains the nature of this problem lucidly and the steps that are being taken and should be taken to meet it. I hope that many will read it and profit by it.

Jawaharlal Nehru

26, October, 1960.

INTRODUCTION

BY

SIR JULIAN HUXLEY

ALL those who feel concern over the present torrential increase in the world's population will welcome Dr Chandrasekhar's book, as an exhaustive statement and analysis, by an Indian, of population and planned parenthood in India.

In the world population problem, India is of outstanding importance for several reasons. First, because of the sheer size of its population; secondly, because it was the first great country—and indeed the first country at all—to enunciate a national policy aimed at limiting population and reducing its rate of increase; and thirdly, because it is an example of the many underdeveloped nations whose future depends on the success with which they can apply western science and technology to modernize their social and economic structure without destroying their cultural heritage.

Let us take these points in order. India's population is second only to China's. Even after partition, India today counts over 370 million people—nearly one-sixth of the total population of the world. The net increase is about 5 million a year, so that in the last ten years it has grown by an amount greater than the total existing population of Great Britain. The annual rate of increase is nearly 1.3 per cent—about the same as that of the world as a whole: though this is not so high as that of many countries, it is operating on such a huge total that the absolute net increase it produces is overwhelming. For purely arithmetical reasons, the net increase will itself increase each year, even if the percentage rate of increase does not itself increase. But the percentage rate of increase is almost certain to go up as diseases like malaria are reduced and sanitation is improved. An official Indian report estimates that the introduction of not particularly drastic health measures, such as could readily be envisaged as practicable in the near future, would save some 3 million lives a year, giving a net annual increase of 8 million—one extra mouth

in less than every 4 seconds, or the equivalent of a new town of over 20,000 inhabitants every day of the year!

Furthermore, the average standard of life is a low one, well below any desirable minimum for health, energy, productivity, or education. To take the basic factor of nutrition, the average daily calorie supply *per capita* is only 1,600 or so, as against the 2,200 accepted by the FAO in its Second World Food Survey of 1952 as a daily minimum standard, or the 3,000 and 3,200 actually enjoyed by Canada and Switzerland respectively. This inevitably means that the majority of India's 370 million people are habitually or permanently undernourished, incapable of achieving full growth, health, or energy. This in turn harshly limits their productivity, so establishing a vicious circle.

Although India is primarily an agricultural country, with an economy based on and supported by its own production of food, the amount of cultivated land is less than 1 acre per head, as against 2.8 acres for the USSR, nearly 3 for the Gold Coast, and over 3½ for Canada. Meanwhile the fertility of the soil is being progressively eroded, both by literal physical erosion and by the drain on its chemical resources caused by constant cropping with inadequate use of fertilizers, and by the diversion of cow-dung to serve as fuel instead of as manure. At the same time the over-expanding pressure of human numbers is leading to grave deforestation, and to the taking over for agricultural purposes of large areas of marginal land that ought never to be brought into cultivation at all. And so another vicious circle is set up.

Emigration can only cope with a few drops in the bucket, and in any case can not be more than a temporary palliative in the present phase of the world. Undoubtedly much can and should be done to raise agricultural productivity, to bring new land into cultivation through large-scale irrigation projects, and to develop both heavy and light industries through a combined programme of urban and rural industrialization; but it is mere wish-fulfilment to suppose that such measures, either singly or in combination, can solve India's population problem. Careful quantitative study of the factors involved leads inescapably to the conclusion that population-increase, unless something is done about it, will continue to outpace them.

In view of all these facts, the Government of India made the

reduction of population-increase one of the main aims of its first Five-year Plan, and the execution of policy was entrusted to the Ministry of Health. Considerable (though still in many people's opinion insufficient) sums of money have been allotted to research and the collection of information on birth control methods, to training people to act as advisers on family planning, to studies of how best to persuade the common people of its desirability and, to help existing private organizations concerned with birth control.

Two pilot projects using the so-called rhythm method were set up with the aid of WHO. The chief result has been a negative one—a demonstration of the complete inadequacy of this method as a main instrument of population-control. But they also had an encouraging positive result: they established that Indian villagers, the men as well as the women, could easily be made aware of the advantages of family planning, and could readily be induced to attempt it.

All this is a valuable beginning: but it is not enough, and it has not had any appreciable effect in checking the tide of population-increase.

There is also the fact that, heartened (or perhaps deluded?) by the happy accident of a few years of above-normal harvests, and exhilarated (or perhaps intoxicated?) by the idea of rapid industrial development as a panacea to increase production, absorb the unemployed, and raise the standard of living, the Government is now laying more stress on industrialization, less on population-control.

Unfortunately, we can be pretty sure that this, however successful, will not catch up with the tide of population increase—unless accompanied by an active campaign for birth control. This, in my opinion, would be more likely to succeed if the subject were removed from the Health Ministry, where it inevitably occupies a subordinate position, and entrusted to a separate Ministry, responsible only for matters concerning population.

Dr. Chandrasekhar gives a detailed and scientific account of India's population problem against the background of social and economic fact and religious and ideological opinion. He is not unaware of the many difficulties to be surmounted—medical, political, psychological, and administrative—but rightly points

out that the problem of population increase is so central and so urgent that difficulty must not be allowed as an excuse for inaction.

His book is an important contribution not only to Indian thinking but to world thinking on this central and overshadowing problem of our age.

PREFACE

MUCH of this essay was written as the Presidential Address of the first All-India Population and Family Planning Conference held in Bombay in 1951. As such, it is an examination of the Indian population problem and a plea for the consideration of family planning as a primary solution in any positive and democratic population policy for India. The question of family planning is, therefore, examined from many points of view, particularly from the social, economic and cultural aspects of an underdeveloped economy such as that of India.

Since the conference, the subject has become the centre of lively controversy in the Indian press where all the *pros* and *cons* are discussed with a welcome frankness, if not always with much understanding. The subject has been debated in the Indian Parliament and in at least four of the state legislatures. The battle for birth control was won in a sense even before it got under way when the Government of India and the Government Planning Commission recently came out officially in favour of family planning. What is more, the Government of India have set up a series of experimental pilot projects to test the effectiveness of the rhythm (or safe period) method of family planning, which is the least expensive and most readily acceptable of proved existing methods in Indian conditions. Thus, the Government of India have already taken a courageous and progressive step in the right direction. Even if these pilot projects fail in view of the inherent difficulties of the rhythm method, as well as the difficulties involved in measuring its reliability, much credit is due to the Government of India for having undertaken the task of exploring the scientific possibilities of this particular method on which millions of mothers place considerable reliance.

This essay incorporates the final results of the 1951 census of India—the All-India Census Reports—which were published in 1954 by the Registrar General, and includes the latest available population and vital statistics.

I am indebted to Mrs Dhanvanthi Rama Rau, President, and Mrs E. Vembu, Secretary of the Family Planning Association of India for inviting me to preside over the conference. My grateful thanks are due to Dr C. P. Blacker, Professor R. M. Titmuss, Dr J. W. B. Douglas and my wife for their critical and constructive comments.

I am deeply grateful to Dr Julian Huxley both for his valuable suggestions and for his kind Introduction.

S. CHANDRASEKHAR

London
January, 1955

PREFACE TO THE SECOND EDITION

I have taken the opportunity of a second edition to revise and bring up to date the relevant statistical data in the book.

As a result of her two Five Year Plans, India has been registering steady progress in many sectors of her economy. The development of health, medical and Family Planning services has received special attention from the Planning Commission and I have taken note of the progress made in the field of Family Planning as a result of the two Five Year Plans in Chapter Six.

India's experiments in Family Planning during the last ten years have yielded certain lessons, which may be of some value to all those underdeveloped countries which may want to embark on serious programmes of population control. The new seventh chapter explores this experience under the title of "Cultural Barriers to Family Planning in Underdeveloped Countries".

This book has now been made available in four Indian languages—Tamil, Telugu, Kannada and Malayalam—under the auspices of the Southern Languages Book Trust, set up by The Ford Foundation in Madras.

I am most grateful to Prime Minister Jawaharlal Nehru for his thought-provoking and generous Foreword.

S. CHANDRASEKHAR

Indian Institute for Population Studies,
Madras, India
September, 1960

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CHAPTER 1

Growth of India's Population

THE population problem has become one of the most fundamental of all human problems. It affects every aspect of man's social life—individual, national and international. It affects the health and happiness of individual families; it affects the material prosperity and social progress of nations; and it affects international security and peace, for problems of population pressure are connected, albeit latently, with issues of peace and war.

And to many countries of the world today—free and colonial, communist and democratic, developed and underdeveloped—no socio-economic issue is more grave or more urgent than that of population growth. The question of overpopulation (controversial academic definitions of the term apart) is mainly a matter of "too many people in relation to the whole set of facts" or the sum of resources of all kinds. Whether the problem takes the form of tremendous pressure of population on a country's available land and other resources or a conflict between a high-fertility cultural milieu and a desire for a higher standard of living, or the degree of technological development being inadequate to cope with material needs, the socio-economic conditions in many countries are such that rapid population growth militates against rising standards of living. The nature and degree of the incompatibility are of course complicated by factors such as political status, religious and social taboos, and colour and cultural barriers to the free migration of peoples. None the less, in most countries, particularly underdeveloped ones such as our own country, excessive population growth defers or nullifies most programmes for improvement in education, public health, sanitation and rural recovery.

The world's population is now larger than it has ever been before; it has grown from about 540 million in A.D. 1040 to more than 2,900 million today, and is increasing by some 48

agrarian distress. Hence, they come to the city single, unaccompanied by their wives and children. When rural-agricultural conditions improve, some of these industrial workers return to their villages and to their farms. Another reason for this rural-urban fertility differential may be the un-registered infant mortality in the cities. Thus, the differential cannot as yet be explained in terms of either the availability or the adoption of contraception. The Census Commissioner, in his Report of the 1951 census, examines the rural-urban differential on the basis of the number of children born to "women who have had at least one childbirth and who remained married on the census day". (As pointed out already, the average number in the State of Travancore-Cochin was 6.4 children for urban women and 6.6 for rural women). He observes that "the urban index is slightly smaller than the rural. But the difference is so small that it is probably not significant."[4]

An examination of the fertility rates by occupational and income groups reveals, however, a slight decline in the high income groups over a long period of time. This group generally embraces the so-called higher castes, who have better educational qualifications, better jobs, higher incomes, and consequently a higher standard of living. Here again, the lower fertility cannot be explained in terms of birth control. Though adequate data on the question is lacking, the real factor behind this appears to be the social ban on widow marriage, practised with such vigour in some of the higher castes, which withdraws many women from potential motherhood. As this ban on widow remarriage (as well as remarriage for divorcees) is not generally observed among the lower castes (which roughly correspond to the low income groups) the fertility of this class is high. But, at the same time, while it is fashionable for the higher social (caste) groups to observe the ban on widow remarriage, they tend to enjoy to some extent higher economic status by virtue of their higher social status and its attendant consequences. This better economic status means better living conditions and lower mortality. Therefore, the higher social and economic groups who would like to, and do, enforce the ban on widow remarriage are the very groups in which the death-rates of husbands of all ages are lower; the

[4] *Census of India* (1951), *Vol.* 1, *India, Part* 1-*A* (New Delhi, Government of India, 1953), pp. 81-83.

in agricultural as well as in the poorer strata of urban society, though not as great as in certain crowded parts of the world, is too great to permit an attitude of *laissez-faire*; it is difficult to see how more people could be taken care of adequately at the present level of national production.

The net addition of 7 to 8 million a year or about 70 million in a decade, or a grand total of 400 or more million in India can be an asset and become really a resource if an overwhelming majority of the population, not to speak of every man, woman and child, enjoyed the irreducible, minimum requirements of decent human existence in terms of food, clothing, shelter, education, health, employment and leisure for recreation. But this is not so in India, and, what is worse, is the well known and depressing qualitative aspect of our population problem. And as the quality of the people is related to the quantity, it cannot be improved, in the context of our available resources, without controlling the quantity. Hence the danger in the number of India's teeming millions not only to her overall economic and social development but also to her place in the modern world.

Growth of Population

In the sixteenth century, according to some rough estimates, the population of the sub-continent was about 100 million. In the middle of the nineteenth century the figure reached about 150 million. In 1871, when the first regular, although incomplete, census was taken, the population stood at 254 million. In 1931, sixty years later, the census revealed 353 million (275.52 million for the present area of India) representing an increase of 10.6 per cent over the 1921 figure. The census of 1941 showed a total of 389 (314.88 million for India alone) showing an increase of 15 per cent over the 1931 figure or an increase of 50 million. The latest census of 1951 has revealed a total of 362 million for the present area. This represents an increase of about 13.5 per cent over the population in 1941 which was 314.88 million adjusted to the present area. Thus the population has increased by some 43 million in the last decade, 1941-51. In 1901, the population of India, excluding the area of Pakistan and Jammu and Kashmir was 235.5 million; in 1951

it was 356.83 million. Thus, in half a century, the population had increased by 121.3 million or by about 51 per cent. The following tables summarize the growth of population in the Indian Republic of today and the undivided India during the last half a century.

TABLE 1

Growth of India's Population, 1901-51*

Census Year	Population in Millions	Increase or Decrease over the Previous Decade	Percentage Increase or Decrease
1901	235·50	—	—0·2
1911	249·05	13·55	5·8
1921	248·18	—0·87	—0·4
1931	275·52	27·34	11·0
1941	314·88	39·36	14·1
1951	356·83	41·95	13·5

*Excluding Jammu and Kashmir, the population of which was estimated in 1951 at 4·41 million

TABLE 2

Growth of Population in undivided India, 1871-1951

Year	Population in Millions	Percentage of Increase
1867-72	203·4	—
1881	250·1	0·9
1891	279·4	11·8
1901	283·9	1·5
1911	303.0	6·8
1921	305·7	0·9
1931	338·1	10·6
1941	389·0	15·0
1951	—	—

Thus the total population of India on 1 March, 1951 was 361.8 million on a total land area of 1.27 million square miles. This figure includes the estimated populations of Jammu and Kashmir (4.41 million) and of the Part B Tribal areas of Assam (1.56 million) where the administration rests lightly and where the 1951 census was not taken.

The following figures relate to the actual area (excluding

Jammu and Kashmir with an area of 92,780 sq. miles) covered by the 1951 census.[3]

Category	Total
Total Population, 1951	356,829,485
Total Population, 1941 (adjusted to present area)	314,766,380
Net increase, 1941-51	42,663,105
Mean decennial growth	12·5%
Percentage increase	13·4%
Land Area	1·18 million square miles
Density, 1951	303 persons per square mile

The *rate* of increase of the Indian population, though high, had not been abnormal. For instance, between 1872 and 1941, the population of undivided India grew by 54 per cent. The United Kingdom during the same period increased by 56 per cent. Japan during the same period increased by 136 per cent. Thus India's rate of increase has not been very rapid. But the growth over the years has not been uniform, for the controlling factor has not been increasing fertility but fluctuating, and in recent years declining, mortality. The population has responded to the presence or absence of wars, famines and epidemics. As these checks appeared or disappeared, the population declined or increased accordingly. Voluntary limitation of births has not played any significant role in determining the size of the Indian population. Till 1901 the population was almost stationary. The years between 1891 and 1921 witnessed an irregular and spasmodic growth of population. The net increase during these thirty years was only 12,200,000. But during the next three decades, 1921-51, the country registered a growth of 10.6, 15, and 13.4 per cent respectively or about 1.4 per cent per annum, yielding a net addition of 27,400,000. The addition during the last thirty years (1921-51) is thus more than double the addition to the population during the earlier thirty year period (1891-1921). And if the present public health conditions continue and improve unaccompanied by any famine, the 1961 census may show yet a larger addition. According to a projection made by the Central Statistical Organization, New Delhi, India's population in 1961 is expected to reach 425 millions.

[3]*Census of India* (1951), *Report, India, Vol. I, Part* 1-*A* by R. A. Gopalaswami (New Delhi, 1953).

But the real problem in India is not the rate of increase but the *net addition* to the existing population every decade—an addition which is sometimes the size of the population of England and Wales. Because of the massive number of the existing population, even a modest rate of increase of 10 or 15 per cent yields a net gain of some 50 million (as between 1931 to 1941) in itself larger than the population of any European country except Germany or Russia, or any Latin American country. And it is this large net addition that constitutes the problem because it nullifies all efforts to improve the admittedly very low standard of living of the Indian people. All programmes to increase the production of food and other commodities and services to give a better *per capita* share to the existing population are either deferred or frustrated as the increasing population overstrains the capacity of education, public health, sanitation, and rural recovery. Thus, in the present circumstances, efforts at raising the Indian standard of living and the increasing growth of population are incompatible.

Fertility

Among all demographic factors, the rate of fertility is the most important, for lack of balance in international fertility levels constitutes the crux of the world's population problems. Within a country, particularly a heterogeneous one like India, fertility differentials between various ethnic, cultural, religious, economic, and occupational groups constitute a serious problem in the formulation of any democratic positive population policy.

The crude birth-rate represents the number of children born in a year per thousand of the population. So long as the sex and age composition of the population remains constant and marriages are contracted at the same average age and with equal frequency, a comparison of crude birth-rates for various years would be meaningful. But all these factors are not likely to be constant over any period. Since these factors vary, fertility rates and reproduction rates are better indices than birth-rates of the quantitative situation and its future. The fertility rate represents the number of female children born each year per 1,000 women between 15 and 45 years of age. Since there may be variations of age groups in the proportion of total women of child-bearing

age, specific fertility rates give a more accurate picture of the population situation. The specific fertility rate represents the number of female children born in a year per thousand women of a given age. It is obvious that there is one specific fertility rate for women 20 years old and another for women 30 years old, etc. The sum total of all the specific fertility rates represents the gross reproduction rate. In other words, the gross reproduction rate represents the number of female children a woman can expect in the whole of her child-bearing period, provided she does not die before it is over.

But, unfortunately, statistics for all these categories for India as a whole are not available. However, to begin with, for our purpose it will be helpful it we can know the number of women in the reproductive period and the children, if not the girls, they have during that period. There is, of course, the factor of the different age-groups within the reproductive period, such as 20-25, 30-35, etc. The 1951 census collected some information on these matters for the Travancore-Cochin State (roughly the present Kerala State). It was found that the average Travancore-Cochin mother who had completed her reproductive period (that is, lived married up to 45 years of age at the time of the census) had 6.6 children, of whom two had died before the census, and 4.6 children who were alive at the time of the census. We do not know whether this is true of all of India or whether the general picture in regard to infant and child mortality is even worse than this.

However, if Indian vital statistics are accepted as fairly reliable, despite their well known inadequacy due to under-registration, we find (after the necessary adjustment and correction) that the birth-rate is roughly between 35 and 45 per thousand of the population. During the decade 1941-50 the average birth-rate was 40 per thousand per year. The recorded rate for the decade is much lower than this figure (27.2), but it is known definitely that the Indian administrative machinery for the registration of vital statistics is extremely defective and a large number of births escape registration, leaving the basic record materially incomplete. However, the official adjusted all-India birth-rate is 40 per thousand for 1950. The regional variations in the birth-rate within India range between 36 and 44—the highest birth-rate is found in central India (44) and the lowest in

South India (36). The overall Indian figure of 40 is comparable to high birth-rates in Egypt (44.4 in 1950), Palestine (Jews 31.8 in 1953), Puerto Rico (35.1 in 1953), Mexico (43.9 in 1952) and Brazil (42 in 1953).

The following table presents India's birth- and death-rates per thousand for the last fifty years in decennial averages.

TABLE 3

Birth and Death Rates of India, 1901-50

Decade	Registered		Estimated by Reverse Survival Method	
	Birth-rate	Death-rate	Birth-rate	Death-rate
1901-10	37	—	48·1	42·6
1911-20	37	34	49·2	48·6
1921-30	33	26	46·4	36·3
1931-40	34	23	45·2	31·2
1941-50	28	20	39·9	27·4
1951-56	—	—	40·7	25·9

The significant fact about the Indian birth-rate is not so much that it is one of the highest in the world but that it has shown only a small decline during the last fifty years. The table reveals a downward trend (only the incomplete, official, recorded rates show a considerable decline) but it is not known whether the little variation that is seen is the beginning of a definite declining trend or merely a natural and normal fluctuation for such a high figure.

As for rural-urban fertility differentials, India conforms only slightly to the experience of other countries. In western and industrialized countries, the decline in fertility began in urban areas and the rural areas tended to follow the downward trend after a time-lag. This has been so because industrialization has been accompanied by the widespread adoption of the family planning habit. Though India may conform to this experience eventually, it has not been the case till now. The lower fertility rates in Indian urban areas must be explained in terms of the adverse sex-ratio in the cities, where the relative paucity of females and the absence of wives constitute a remarkable feature. Indian industrial workers have a rural background and they drift into the cities in search of employment only when they are faced with

agrarian distress. Hence, they come to the city single, unaccompanied by their wives and children. When rural-agricultural conditions improve, some of these industrial workers return to their villages and to their farms. Another reason for this rural-urban fertility differential may be the un-registered infant mortality in the cities. Thus, the differential cannot as yet be explained in terms of either the availability or the adoption of contraception. The Census Commissioner, in his Report of the 1951 census, examines the rural-urban differential on the basis of the number of children born to "women who have had at least one childbirth and who remained married on the census day". (As pointed out already, the average number in the State of Travancore-Cochin was 6.4 children for urban women and 6.6 for rural women). He observes that "the urban index is slightly smaller than the rural. But the difference is so small that it is probably not significant."[4]

An examination of the fertility rates by occupational and income groups reveals, however, a slight decline in the high income groups over a long period of time. This group generally embraces the so-called higher castes, who have better educational qualifications, better jobs, higher incomes, and consequently a higher standard of living. Here again, the lower fertility cannot be explained in terms of birth control. Though adequate data on the question is lacking, the real factor behind this appears to be the social ban on widow marriage, practised with such vigour in some of the higher castes, which withdraws many women from potential motherhood. As this ban on widow remarriage (as well as remarriage for divorcees) is not generally observed among the lower castes (which roughly correspond to the low income groups) the fertility of this class is high. But, at the same time, while it is fashionable for the higher social (caste) groups to observe the ban on widow remarriage, they tend to enjoy to some extent higher economic status by virtue of their higher social status and its attendant consequences. This better economic status means better living conditions and lower mortality. Therefore, the higher social and economic groups who would like to, and do, enforce the ban on widow remarriage are the very groups in which the death-rates of husbands of all ages are lower; the

[4] *Census of India* (1951), *Vol.* 1, *India, Part* 1-*A* (New Delhi, Government of India, 1953), pp. 81-83.

result is prolonged married status and relative higher fertility.

This means that firstly the married women (15-45) in the higher social and economic groups have more children (despite the ban on widow remarriage) because the husbands live longer

FACTORS

Tending to high fertility	Tending to low fertility
1. Early marriages.	1. Delayed and postponed marriages.
2. Lower mortality rates.	2. Higher mortality rates.
3. Lower mortality rates of husbands yielding less widowhood and higher age at widowhood.	3. Primary and secondary stages in the improvement of living standards (leading to an effective desire to hold on to the higher level by a voluntary limitation of the family size).
4. Improved economic conditions and higher level of living (first stage) leading to more children.	4. Higher education and prolonged training to acquire new skills.
5. Lower infant and childhood mortality.	5. Urbanization (long run).
6. Promotion of widow remarriages and withdrawal of social ban on widow remarriage.	6. Inculcating desire for family limitation and ability to translate this desire into effective action through available and acceptable means (contraception, rhythm method, etc.).
7. Relaxation of existing religious and cultural taboos restricting sexual intimacy.	
8. Absence of family planning.	

and the incidence of widowhood is less. Secondly, the women of the lower social and economic groups also have more children (despite the higher mortality rate for husbands) because there is no ban on widow remarriage.

It is apparent, therefore, that there is no significant differential fertility yet. And the little decline in fertility that has been registered for certain groups in the Indian population has not become a marked general trend and the differential is not large enough to affect adversely the future growth of population. Therefore, if there is no fundamental change in the socio-economic order, the only factor that will contribute to the future trend of India's population will be not the deliberate control of the birth-rate but high mortality. And this is something that cannot be looked upon with equanimity by anyone interested in India's welfare.

In the absence of reliable data and on the evidence of figures derived from the census reports and certain field studies of restricted scope, it is difficult to foretell the future trends of Indian fertility with any certainty. However, any evaluation of such trends must take into consideration the balance sheet of factors favourable and unfavourable to fertility trends in India on page 28.

Mortality

The population growth during the last century has been conditioned to a considerable extent by the high but fluctuating death-rate. Famines, epidemics, the general insanitary environment and wars and their aftermath have contributed to the death-rate, though the last factor has almost disappeared in the last half-century. Even during "normal" years the death-rate has been consistently high because of the striking lack of public sanitation and hygiene and widespread mal- and under-nutrition of the people. The death-rate rose distressingly during bad years when rains failed, crops withered, and famine and epidemics broke out due to the scarcity of food. It can be said with some truth that famine and epidemics alone have been the major controlling factors in the growth of population till recent years.

The Indian death-rate is high, about 30 per thousand per annum. Here again, the official resgistered death-rates are considerably lower but these are under-estimates because of incomplete returns. The average adjusted[5] death-rate during the decade 1941-50 is 27 per thousand per annum. As for regional variations, the death-rates range from 34 in Central India to 21 in South India for the same period. This means that nearly 10 million people die every year in our country! While the total death-rate is appalling enough, the death-rate by various age-groups is even more disconcerting. The most disquieting factor of the Indian death-rate is the high incidence among first-year infants, women in childbirth and women in the reproductive age groups.

The infant mortality rate in India is very high, for nearly one-ninth of the babies born die before they are one year old! During the last fifty years, the infant mortality rate has ranged from 116 per thousand live births, the lowest recorded (in 1951) and 261,

[5]*Census of India* (1951) *Report, Vol.* 1, *Part* 1-*A, op. cit.* pp. 77-80.

the highest recorded (in 1918). However, the rate has been exactly halved from 232 in 1900 to 116 in 1951. The rate in England and Wales was reduced from 154 in 1900 to 30 in 1951. In the United States of America it was 122 in 1900 compared to 29 in 1951.

Infant mortality may be grouped roughly into two main classes, namely, those dying within one month (neo-natal mortality) and those surviving the first month of life but dying before they complete their first year. Deaths in the first group are due primarily to pre-natal and natal influences. The second group covers those who have succumbed in the main to causes arising from post-natal influences such as the various epidemic diseases, diseases of the respiratory and digestive system, faulty feeding, and environmental factors. The reasons behind the enormous wastage of infant life in India belong to both these categories and range from ill-advised pregnancies (in the sense that they are not advised at all), absence of ante-natal care, malnutrition and low vitality of the expectant mother, to meddlesome midwifery of the *dai* and poor mother-craft. If the infant mortality rate is conceded to be the most sensitive index of a nation's social welfare, public sanitation and environmental hygiene, our claim to any development of these is small indeed. What has been achieved elsewhere in lowering the infant mortality rate—in Sweden, New Zealand, and Holland the rates for 1952 were 20, 22 and 22 respectively—should eventually be possible in India.[6]

As for maternal mortality, the available figures are equally disturbing. Sir John Megaw, when he was Director-General of Medical Services in India, made a random sample survey in 1932 and arrived at the maternal mortality rate of 23.5 per 1,000 births.[7] That is, about 25 out of every 1,000 mothers are

[6]For a detailed discussion of the subject of Infant Mortality, see S. Chandrasekhar *Infant Mortality in India:* 1901-1955 (London, Allen and Unwin, 1959) passim.

[7]Sir John Megaw. *An Enquiry into certain Public Health aspects of Village Life in India* (New Delhi, 1933), p. 36. According to Dr J. Jhirad's investigation into maternal mortality in the city of Bombay in 1937, the rate was 13·5 per 1000 deliveries, maternal mortality being defined as "any death occurring during pregnancy, labour or puerperium extending to a month from the labour or later if the death was definitely proved to be the result of labour." *Report of an Investigation into the Causes of Maternal Mortality in the City of Bombay* (New Delhi, Government of India Press, 1941).

doomed to die in childbirth. In other words, more than 200,000 mothers die every year as a result of maternal labour.

Thus, generally, out of the 27 deaths which occur among 1,000 people in one year, 11 are children under 5 years of age, of whom 7 are infants who have not completed their first year. Roughly, about 50 per cent of the total mortality in any given year is among children below 10 years of age, while the corresponding figure for England and Wales and the United States of America is below 12 per cent. In brief, out of every hundred babies born, nearly a fifth die by the time they reach their first birthday, and about half of these die in their first month. When the fifth birthday arrives, 40 per cent of those born have been claimed by some fatal disease or other, and when the twentieth birthday is at hand, only 50 per cent are left. By the sixtieth birthday, only 15 per cent survive!

But despite these infantile, maternal and over-all mortality rates, the average annual addition to the population of India continues to be more than 7 million. During the last two decades there has been, however, a slight but steady decline in the general mortality rate. For instance, the infant mortality rate, which was 181 per 1,000 live births in 1930, has been reduced to 116 in 1951, according to the official figures. Thanks to slightly improved sanitation and public health, relatively improved medical care, and a small increase in the number of medical and ancillary personnel and the availability of wonder drugs, the death-rate is apparently showing a declining trend. There is, however, an enormous scope for reducing the death-rate and such a reduction is bound to occur if the large-scale programmes for improving the health of the country, as envisaged in India's Five-year Plans, are effectively put into operation. It has been calculated that even a moderate improvement in the present health conditions and the provision of some modern training to the indigenous midwives (*dais*) can save 3 million additional infant lives. When these are effected, India's population will increase not by 7 or 8 but perhaps by about 10 million every year. And it is possible that the 43 million increase that took place between 1941 and 1951 could take place in half the period. It is therefore obvious that a planned and purposeful control of mortality without a cor-

responding control of the birth-rate can only have depressing consequences on the Indian economy.

It is true that high mortality and morbidity have existed in India and other underdeveloped countries from time immemorial and they were taken for granted till recently. But we find them harrowing today, not in the light of India's past history, but in comparison with the medically advanced western countries of the present day. Therefore, in an over-all view, there are serious drawbacks to a rapid reduction in mortality, *welcome in itself*, when fertility remains high, as it would aggravate the population problem. Humane persons who have the welfare of the individual mothers and children of India at heart could only embark with wholehearted enthusiasm on the beneficent policies of preventive medicine when birth-rates approximate to the level of the death-rates we are seeking to attain.

Today, however, the death-rate unfortunately is the decisive factor in Indian demography. No comment is necessary on this inordinate, tragic and unnecessary loss of human life. But this is not all. There are many who do not die but who cannot be counted among the truly living, healthy, active and gainfully employed because of the shocking nature of Indian morbidity.

Morbidity

If the available information on birth and death rates is somewhat incomplete and unreliable, that on the incidence of diseases is even more so. Rural India, comprising 558,089 villages sheltering 83 per cent of the total population, has no hospitals, clinics or specialized medical services. Thousands of villages do not have the benefit of even a peripatetic dispensary. Hence there is no way of estimating the extent of the morbidity of the overwhelming majority of the Indian population. Some sporadic information, however, is available for certain urban areas, primarily cities, and such figures must be multiplied five- or six-fold to get a complete picture for India as a whole.

For instance, according to official sources, in normal years malaria is directly responsible for at least 1 million deaths in a year. In view of the inadequate nature of Indian vital statistics, this really means that at least 3 million people die of malaria on

an average in a year. If 3 million people *die* of malaria, it means that at least ten million people *suffer* from it. The cost of treating the affected people—granting that the sufferers get some kind of treatment, expert or quack—and maintaining them in low health for some weeks, and the indirect cost of man-hours lost in fields, factories and offices, must be enormous. Those who actually recover from an attack of malaria find that their already low efficiency, due to lack of proper nutrition, is further impaired, making them less resistant to that catalogue of diseases that haunts the Indian countryside. Diseases ending in deaths are said to be selective in the sense that they wipe out the weaker element, but they cannot be said to improve the quality of those who narrowly escape death. If morbidity statistics, such as they are in India, are interpreted in this manner, the resulting picture in terms of health and vitality is too grim to need any comment.

Not only malaria, but cholera, kala-azar, smallpox, beri-beri, dysentery, tuberculosis, hookworm, filariasis, guinea-worm, and venereal diseases are ever present and take their due toll. Then there are leprosy, blindness, partial-sightedness, mental disorders and deficiencies and a score of other disabilities and infirmities. All of these are curable by and large, or, what is more important, often preventable; but in India the lack of comprehensive and organized medical services, manned by an adequate number of qualified personnel, makes them very formidable. However, while the absence of a national health service in a real sense is deplorable, it must be pointed out that curative medicine will only half solve the problem. As long as the people's vitality and resistance to disease is low on account of poverty (in the sense of incredibly low incomes), malnutrition and ignorance, and as long as the shocking insanitary and unhygienic environment of the towns and villages persist, any medical approach to this problem can only be fragmentary.

Despite the inadequacy and often the absence of any returns on the specific causes of mortality, a rough idea can be obtained from the following table on the composition of the death-rate for 1950, the latest year for which some detailed information is available. The death-rate of 27 per 1,000 of population was distributed as shown in the table. We know that many deaths are unreported and hence unregistered (for 1950 the registered crude

death-rate is 19.4 for 1,000 while the corrected death rate is 27 per 1,000). Besides, it is highly probable that where deaths have been unattended by doctors, as considerable numbers are, the returns usually list "fever" as the cause of death. Thus the term "fever" in Indian mortality returns is an omnibus term concealing within its fold most of the known diseases of man. This lack of precise information negatives even the meagre efforts of the Public Health Department because the authorities, who are anxious to control the high death-rate, are more or less unaware of the exact causes that contribute to it.

While this lack of knowledge does not and should not stop public health work, precise knowledge may enable expenditure on public health work to be directed in such a manner as to yield quicker and better returns.

TABLE 4

Causes of Deaths in India (1950)

	Cholera	Small-pox	Fever	Dysentery and Diarrhoea	Respiratory Diseases	Injuries	All other causes
Deaths per 1,000 of population	0·4	0·2	13·0	0·1	0·9	1·8	10·6
Percentage of Total	1·8	0·9	58·1	0·5	4·1	8·1	26·5

CHAPTER 2

Social and Economic Factors

THE demographic situation of any region is largely the product of its peculiar social characteristics, affecting in their turn births, deaths and migration. The population problem in India would be very different if the social institutions of early marriage, universality of marriage, the social ban on widow remarriage and the Hindu joint family and other institutions and attitudes resulting in a high birth-rate and a sex-ratio in favour of males, did not exist. But as these institutions with a socio-religious tradition and cultural sanction behind them exist and condition the lives of an overwhelming majority of the people, the demographic problem has become what it is today.

Early and universal marriage are dominant features of the Indian social scene. Indian girls attain puberty between the ages of twelve and fifteen and though often physically and emotionally immature, they are physiologically ready to bear children. Though according to Indian law (the Child Marriage Restraint Act, 1929, Act XIX of 1929) child marriages (males under 18 and females under 14 years of age) are punishable offences, the 1951 census revealed that there were 2,833,000 married males and 6,118,000 married females, 66,000 widowers and 134,000 widows—all between the ages of 5 and 14! That is, more than 9 million young Indians under the age of 14 were found married in contravention of the law during the census year. In 1951, out of every 100 girls aged 15 or over, only 6 were unmarried, while among 100 males aged 15 and over, 20 males were unmarried. The figures for the United Kingdom in 1951 and for the United States in 1940 were 27 and 26 and 33 and 26 respectively. While child marriages as such have largely disappeared today (with the exception of the 6 million girls who were married under 14 years of age), an overwhelming majority of the young women between 15 and 20 years of age are in the married state. This is particularly true in the rural areas where the girls marry as soon as they reach puberty,

begin bearing children early, with no adequate spacing between childbirths—all this resulting in exhaustion and premature death. Early marriages, ill-advised pregnancies and high maternal and infant mortality—all seem to go together.

The second factor is the universality of the married state. Everyone in India, sooner or later, gets married. It is a quasi-religious duty. As an individual's economic security is not usually a prerequisite to marriage and as there is no individual choice, by and large, in obtaining a partner, there is no economic or emotional deterrent to marriage. In the country as a whole, for people of all ages, roughly every other male and more than 3 out of every 5 females are married. "We do not know the number of married females aged 14 nor of married males aged 15, 16, and 17. The latter marriages are punishable under the law while the former are not. If we may set off one against the other, the total number counted under age 15—nearly 9,200,000—may be regarded as the approximate number of marriages contracted in contravention of the law."[8] As the age factor is important, those 15 years and over are relevant in this connection. Only 20.3 per cent of the males aged 15 and over and 6.4 per cent of the females aged 15 and over were found unmarried at the time of the 1951 census. The comparable percentages for the United Kingdom in 1951 was 26.9 and 25.5. But those who were unmarried at the time of the 1951 census would certainly marry in the next few years. That is, taking into consideration all widows (12.8 per cent of all Indian females are widows), some widowers who may not marry again (5 per cent of all males are widowers), those who are divorced, deserted and separated, and ascetic and mendicants who may never marry, almost everyone of marriageable age (and some much below that age) was actually married. When such factors favourable to the postponement of marriage as prolonged education and training, the necessity for economic security, eagerness for personal and social advancement, free choice in securing marriage partners, and other considerations that normally operate in western society will come to operate in India, it is difficult to say. But the sooner such considerations come to prevail the easier will be the approach to solve some of India's social problems.

A third striking characteristic of the Indian social scene is the

[8] *Census of India* (1951), *op. cit.* p. 72.

paucity of females. There has been a deficiency of women in the Indian population throughout the whole of her regular census history. In 1951 there were 947 females for every 1,000 males. In 1941 the sex-ratio was 934; in 1931 and 1921 the ratio was 940. Earlier censuses have revealed similar deficiencies of women in India and a slight fall in the proportion of females has been going on in India since 1901. This low proportion of females in the population appears to be relatively steady; while there has been a slight fall between 1931 and 1941, a rise has been registered between 1941 and 1951. This position is markedly in contrast with the situation in certain countries such as the United Kingdom and the United States where the sex-ratio in 1950 was 1,085 and 1,014 females per 1,000 males respectively, indicating an excess of females.

Several explanations have been offered for this phenomenon of deficiency of females in India. Some explain it, and this is the simplest explanation, as the result of relative under-enumeration of women. This is possible, but during the last fifty years the efficiency of the Indian Census organization has consistently improved while the adverse sex-ratio has tended to increase rather than decrease. The 1951 census was easily the most efficient census we have had as it obtained the willing co-operation of the people. What is more, it was the first Indian census to check the reliability of the count on the basis of a random sample survey. We know that the margin of under-enumeration was insignificant. What is more, the sex-ratio in urban areas where the 1951 census count was quite reliable was more adverse (860 females per 1,000 males) than the rural areas (966 females per 1,000 males). The migration of males from villages into towns, added to the high proportion of males in urban areas, contributes to the abnormality of the urban sex ratio. The paucity of women in the Indian population appears therefore to be a fact.

What is the explanation? Some have argued (from a very unbiological point of view) that excessive masculinity is an index of "racial" decadence, but the sex-ratio is more unfavourable in the north and north-west region of undivided India, parts of present Pakistan, where the so-called "martial races" once lived and presumably continue to live. This situation is true within India today. The lowest female sex-ratio is found in the

north-west region while an almost equal sex-ratio is found in South India. We have little knowledge of what constitutes "racial decadence" and still less scientific evidence of the causes and symptoms of such decadence. If there is any truth in this explanation, the supposedly virile people of the north-west must be the most decadent people. As we cannot have it both ways there seems to be little truth in this explanation.

Some others, like the Census Commissioner for Bombay (1921) and the Census Commissioner for India (1931), have offered a biological explanation. According to the former "the Indian endogamous caste with its exogamous divisions is a perfect method of preserving what is called in genetics the 'pure line'. The endogamy prevents external hybridization, while the exogamy prevents the possibility of a fresh pure line arising within the old one by the isolation of any character not common to the whole line. With the preservation of the pure line the perpetuation of all characters common to it necessarily follows. And there is no reason why sex-ratio should not be a transmissible character. An excess of either sex may in this view be caused either by (1) the birth of more of that sex than of the other, or (2) the possession by the children of that sex of some character which tends to their preservation, probably greater resistance to certain diseases."[9]

The latter, accepting this view, comments, "Whether this (above) proposition be entirely acceptable or not, it may be conceded that if once a caste, whether as a result of inbreeding or some totally different factor, has acquired the natural condition of having an excess of females, this condition is likely to be perpetuated as long as inbreeding is maintained. Caste therefore would appear to be of definite assistance to the Hindu in his superlative anxiety for male children; moreover, since the higher the caste the stricter, in the past at any rate, the ban on external exogamy, this tendency would show more patently in the higher caste and explain why the proportion of females to males increases in inverse ratio to social status."[10] This explanation is at best

[9]*Census of India*, 1921. *Bombay Presidency, Part I—General Report* by L. J. Sedgwick (Bombay, 1922), p. 103.

[10]*Census of India*, 1931, *Vol.* 1, *India, Part* 1. Report by J. H. Hutton (Delhi 1933), p. 197.

plausible but we have very little knowledge about the presence of a genetic factor, if any, in the Hindu caste system. Possibly not. While there may be some truth in this explanation in the sense that excessive inbreeding is harmful, it does not adequately explain the sex-ratio at birth.

The available statistics tell a different story. Actually, as one would expect, there is a definite excess of male births over female births. This is the view of the Indian Registrar-General (1953) but one cannot be too sure of this in the face of obvious lacunae in the registration of births. Anyway, males and females are not born in equal numbers and possibly male births are slightly superior in numbers. Secondly, the infant mortality rates for males are higher than those for female infants all over India. Thus the male babies lose the initial advantage by the end of the first year. Between the ages of 1-5, India has an excess of girls but at the next age group, 6-10 and subsequently, the sex-ratio appears to be reversed in favour of males.

A more rational explanation for the paucity of females appears to be that though the female infant is definitely better equipped by nature for survival than the male, the advantages she has at birth are probably neutralized in infancy by comparative neglect and in adolescence by the strain of bearing children too early and too often. As Hindu parents, by and large, at least in rural areas, put relatively a greater premium on male children, they are apt to treat female children with relative and sometimes unconscious neglect, especially when they are assailed by infantile ailments. This, coupled with early marriages and frequent deliveries, results in greater and early death among women. We have some comparable evidence in China that supports this view. Dr Ta Chen, discussing the sex-ratio in the Kumming Lake region in China, points out, "It seems clear that in China relatively more female infants are born, but as they grow up, the male babies gradually catch up with them in numbers, evidently indicating a proportionately higher mortality among female children. This may be due to the fact that in the Far East generally, and in China particularly, parents usually put higher value on male children for the perpetuation of the family line and for the observance of filial piety. Thus female children are unconsciously

neglected, thereby leading to the higher death-rate among them."[11] While it is difficult to assert that the Chinese experience is applicable to Indian conditions *in toto*, it cannot be denied that some bias in favour of male children in rural families, for obvious reasons, does exist in India. Thus, while the sex-ratio at birth cannot be changed, it need not be made more adverse by cultural-social bias towards girls.

The social ban on widow-remarriage is yet another reactionary feature of Indian society. The Indian demographic situation is to a considerable extent the product of its social institutions, for one undesirable social institution leads to another, and so on, in an endless chain. This practice of "socially sterilizing" the widows, results in considerable disparity in age between husbands and wives. Since most widowers remarry, and since they do not marry widows, they have to seek wives among girls much their juniors. This unequal age combination itself leads to an increasing number of widows, for the old husband soon passes away, leaving behind his young wife a widow, and of course, she cannot remarry.

The disproportionate sex-ratio and the resulting deficiency of women keep up the custom of early marriage for girls. As bachelors and widowers have to take brides of any age they can get, the disparity between partners is increased. As observed already, this difference in age increases widowhood. Since widows cannot remarry, while widowers can and often do, widowhood increases the already existing shortage of eligible brides. Thus the vicious wheel whirls on!

Thus, the two significant facts about the wasteful balance between births and deaths are the large decennial increases in the population and the tremendous human cost at which the increase is being maintained.

Our Standard of Living

Three hundred and sixty-two million or even six hundred million people in India need not constitute a population problem were all provided with a fair share of the basic minimum requirements of an acceptable level of living. But our standard of living is admittedly very low compared to what it could be.

But what is our standard of living? Some in India think that

[11] Ta Chen, *Population of Modern China* (Chicago University Press, 1946), p. 19.

it is misleading to judge our level in terms of western standards. It is difficult to define the term "standard of living" for, as Professor Fairchild points out: "A standard of living is that level of comfort which someone hopes to have or wishes he had or thinks he ought to have."[12] But no matter what the definition—and the definition of this term is bound to be vague—our *per capita* "consumption" of food, clothing, housing, education, medical help, cultural amenities, etc., is far from satisfactory even according to any theoretical Asian (and not western) optimum standard of living that we may devise.

Our food shortage—at best a euphemism—has become chronic and there is no need to dilate upon it. Millions of our people are close to the famine level. While the total production of rice and wheat has increased in recent years, the *per capita* calorie consumption of cereals continues to be low. This does not mean that we have abolished famines for ever. Our agriculture is still so dependent on the vagaries of the monsoon that no thoughtful person can set store by a bumper crop now and then. Our consumption is still at 1,700 calories per head per day. Our *per capita* consumption of cloth, primarily textiles, is less than seventeen yards, far below our minimum requirements. There is no adequate housing policy either by the central, state or local governments; private enterprise is responsible for some sporadic building.[13] Millions exist in rural hovels and urban tenements deprived of even the basic necessities of civilized existence. And thousands live and sleep on our pavements and lead a parody of life. We are unable to meet our total educational and health needs. Our overall literacy rate is still only 15 per cent and among those 10 years old and above the rate is 22 per cent. The terrific rush for seats in colleges and universities and particularly in professional schools is incredible, and the heartache of the rejected applicants at the beginning of every academic year is pathetic; and yet the intake is much too high for the teaching capacity of the colleges; and the crowds that throng the gates of our hospitals and clinics in quest of medicines and cures mean only one thing; our ability and resources

[12]H. P. Fairchild, "Optimum Population" in the *Proceedings of the World Population Conference*, edited by Margaret Sanger (London, 1927), p. 75.

[13]S. Chandrasekhar, "Population Growth and Housing Needs in India" *Population Review* (Madras), January, 1957.

to provide adequate educational facilities and medical help is not keeping pace with our high birth-rate. The most important measure of this low standard of living is India's *per capita* national income. An expert committee of the Government of India has recently calculated our national *per capita* income for the years 1948-49 at Rs. 255.[14] And the *per capita* income in 1956-57 was reckoned by the Government at Rs. 291.5.[15] But as these figures are not strictly comparable to the national income figures of other countries, the Indian figure, when compared to those of other countries, does not convey a reliable picture. However, according to the United Nations' survey, the national incomes of India, U.K., and U.S.A. in 1949 were $81, $833 and $1,453 respectively.[16] It is this low income in India that starts the vicious circle of such a poor standard of living for our people.

In brief, the question is: how can we raise our standard of living (which means more of everything for everybody) and cut down our death-rate (which means keeping alive more people who would die otherwise) when we are unable to support the existing population even at a miserable standard of living, if at the same time our population continues to increase by 8 or more million every year? It is simply impossible. What then is the way out?

Development of Agriculture

The problem of population has to be considered in relation to the means of sustenance, primarily food. Almost 70 (69.8) per cent of the population is dependent on agriculture for a livelihood. For a population of 362 million (in 1951) we have a total land area of 813 million acres (81.3 crores of acres). The land area *per capita* is only 2.25 acres. As the mouths to be fed every year increase, the area of productive land diminishes. The area of cultivated land *per capita*, according to the 1951 census report, has declined from 109 cents (100 cents=1 acre) in 1891 to 101 in 1921 and to 84 in 1951. During the last half a century it has dropped from 103 in 1901 to 84 in 1951. Not only is cultivated land not increasing

[14] *First Report of the National Income Committee* (New Delhi, Government of India, 1951), p. 33.

[15] *India*, 1960 (New Delhi, Government of India, 1960), p. 183.

[16] *National and Per Capita Incomes of Seventy Countries*, 1949 (New York, United Nations, 1952), p. 6.

commensurately with the growth of population, but the *per capita* holding is actually declining due to sub-division and fragmentation of the land as a consequence of the laws of inheritance and Government efforts to fix ceilings on land ownership. That there is a tremendous pressure on the land today cannot be denied.

Indian agriculture is characterized by primitive methods of farming, and the subdivision and fragmentation of the land (which renders mechanization impossible, even granting the necessary capital for machinery is available); lack of irrigation and consequent dependence on the uncertain deluge of the monsoon or drought—all these leading to un-economic holdings and to an excessive dependence by the majority of the people on land for a living. Moreover, a quasi-medieval land "tax" system has created a large number of absentee landlords and parasitic middle-men who have come to possess undue rights on land, claiming a considerable share of the income without deserving it. Fortunately, this aspect of the problem is receiving attention in our recent efforts to abolish the *zamindari* and *inamdari* systems.

The primitive technique of Indian farming is responsible not only for the low yield *per capita* even when compared with other Asian countries such as Japan and China, but also for the gradual deterioration of land, soil erosion, and progressive deforestation. By and large, agriculture for many of our farmers has become an uneconomic and frustrating way of life and not a successful business proposition, which it ought to be.

This situation does not mean, however, that there is no scope for improving Indian farms and their yields. According to the latest available statistics (1951)[17] on the pattern of land utilization in India, we find that some cultivable but uncultivated wasteland, constituting 11 per cent of the total available land, is still available. Thus, of a cultivable area of 417 million acres, only 66 per cent is sown with crops, 13 per cent is fallow and no less than 11 per cent of the available land is cultivable but unused. Then there is land "not available for cultivation". About this land in undivided India, the Royal Commission on Agriculture

[17]Agricultural statistics in India are still rather primitive and comparisons between one government publication and another are hazardous because of elastic definitions of land usage terms and changing criteria of comparison.

(1926) observed: "It is difficult to believe that the whole of the vast area now classed as not available for cultivation, amounting as it does to 150 million acres or 22.5 per cent of the total area of British India (the former provinces) is either not available for cultivation or not suitable for cultivation."

TABLE 5

Agricultural Area of the Indian Republic, 1951*

	Millions of acres	Percentage
Net area by professional survey	781	100
Area under forest	109	14
Area not available for cultivation	255	33
Cultivable waste other than fallow	88	11
Fallow land	54	7
Net area sown with crops	275	35

*Land use statistics for about 10 per cent of the total area are unavailable.

India has therefore apparently not exhausted the supply of her cultivable land though such land is admittedly of an inferior quality. And what is actually cultivated is often eroded and exhausted because of our primitive techniques of farming. With modern methods of agricultural science, of erosion prevention and soil reclamation, the cultivated land could probably be made to double its present yield; and some at least of the so-called uncultivable waste could be brought under profitable cultivation.

While increased yield and more acreage under cultivation are possible with the aid of science, they cannot by themselves afford a better standard of living to the Indian people or completely solve the population problem unless and until a substantial number of people now dependent on land are transferred to some other productive employment.

Industrialization

Industrialization is often offered as a stock remedy for Indian population problems. Even a bare discussion of the possibilities of rapid and large-scale industrialization of India is beyond the scope of this essay. But it may be pointed out that the basic requisites for industrialization, namely, raw materials, capital

resources, skilled labour, a market and technological "know-how" are available in India to a greater or lesser degree. However, such industrialization as has taken place in India during the last thirty years, has not helped to ease population pressure because it has been insufficient, piecemeal and unplanned with the result that the percentage of population gainfully employed in modern industry has been a very small percentage of the total population. According to the 1951 census only 10.5 per cent of the total population (including dependents) was supported by industry. This haphazard, meagre and unbalanced industrialization has led to, on the one hand, the decay of cottage industries causing further under-employment in the rural areas, and on the other hand, an increase in the pressure of population on the land. As envisaged by the Planning Commission (and being implemented by the Five-year Plans), only large-scale and rapid industrialization combined with the development of cottage industries—there need be no conflict between these two—can keep pace with the growth of population and at the same time siphon off surplus population from dependence on the overcrowded land to urban factories or to village industries.

While it is obvious that India is bound to remain mainly an agrarian economy for some decades to come, Indian industrialization is important in the solution of her population problems for at least two reasons. First, it could increase the productivity of labour and create an abundance of badly needed commodities and services and transform the present economy of near-scarcity into an economy of sufficiency, if not of possible abundance. But here again, it could only do so if sufficient capital and skills are available to overtake population increase. Secondly, and this is probably more important for India, industrialization could encourage the development of new urban patterns of living which often lead to the control of the birth-rate. The "why" of this process need not be discussed here but this has been the experience of the United Kingdom, the United States and the west European countries generally and Japan in the east. There is no reason why India should not conform to this experience of other countries where industrialization and higher standards of living have been accompanied by declining fertility.

CHAPTER 3

Possibilities of Migration

Internal Migration

WHAT about migration as a solution to the Indian population problem? As for the possibility of internal migration as a method of relieving population pressures, there is not much scope as there are no habitable empty spaces within the geographical confines of India, unless the Rajputana and other deserts are reclaimed. At the moment, on the contrary, the deserts are imperceptibly but gradually encroaching upon us. There are, of course, certain states and regions in India where the crude density per square mile is relatively low. The regional differentials in density per square mile are so large that roughly half the population of India lives on less than a quarter of the total available land. For instance, the lower and upper Gangetic plains support a heavy concentration of population and have densities ranging from 832 to 681 persons per square mile. On the other hand, we have the low density regions as well, ranging from 118 persons per square mile in the eastern Himalayas to 46 per square mile in the desert area. Between the states, Assam, for instance, is relatively underpopulated in comparison with, say, West Bengal. And during the last two decades, Assam received half a million immigrants from the adjoining states of the Indian union. The provision of some admittedly inferior land for half a million people during some twenty years is only a drop of relief in an ocean of land hunger.

Despite difficulties, there have been slender waves of inter-provincial migration all through the years. Certain patterns of inter-provincial migration established in India during the last thirty years in particular, show that inter-provincial migration has been on the increase. The Assam plantations, for instance, get their labour supply chiefly from distant Chota Nagpur. The nearby Bengali peasants are not, apparently, attracted by these

plantations, nor are they absorbed by the Bengal jute mills but they move in to occupy the inferior land in the Assam valleys. The coal mines in Chota Nagpur do not attract the people nearby and so labour has to be recruited from Bihar and Uttar Pradesh. We also know that southerners go north in quest of employment though we do not know how many northerners come south in search of business opportunities. We have no figures of these internal population shifts but some of these population movements are more or less of a seasonal or a temporary character and it is difficult to evaluate their long range results. And then, when one group of people has moved out of a certain province another group of people seems to be moving in. In any case the net result of inter- and intra-provincial migration does not constitute any significant relief to the mounting pressure on the land.

If migratory movements between different regions are to be explained as a response to the "pull" of prosperity from less crowded areas, rather than as the "push" of poverty from over-crowded areas, there are no regions in India where the standard of living of the masses is markedly high enough to act as a "pull". The variations in the different levels of living in the different states and agricultural regions are not significant enough to encourage inter-provincial or inter-regional migration. After all, migration, unlike water, flows from a blighted region of low level of living to a prosperous one of high level of living. There are no conditions so absolutely unfavourable as to push people outside their regions if they have nowhere else to go. Thus, whatever internal migration that has taken place in the last thirty years in India has been in response to rigorous famines or the construction of new irrigation projects and canals rendering the cultivation of more land possible. As severe famines or prosperity-promoting irrigation projects are not annual events, the impetus to migrate has not always been present.

Besides these considerations, several other factors of a social, economic and religious nature characteristic of Indian economy can be cited to explain the traditional immobility of the Indian population and the slender volume of internal migration. The comparative stay-at-homeness of the Indian population is a regular feature of many an Indian census report. In all the censuses (except the last one of 1951, which period witnessed the

Indo-Pakistan population transfers on an unprecedented scale) nearly 90 per cent of the people have been enumerated in the districts in which they were born. Another 5 per cent have been enumerated in adjoining districts which were more industrialized or urbanized than the districts in which they were born. In 1901, only 9.27 per cent of the total population was enumerated outside the districts of their birth. In 1911 this percentage fell to 8.7 and in 1931 this ratio was repeated. Though figures for 1931-41 are not available, there is no reason to expect any radical change, for during that decade there was no significant inter-provincial migration, as was witnessed in the last decade consequent on the partition of India.

The economic reason for this immobility is simple. As the majority of the people are wedded to an agricultural life, and since land is the chief source of sustenance, the average Indian peasant cannot possibly leave the farm on which he was born and where he works. It is not that agriculture in India is such a paying proposition that it renders emigration to urban areas unattractive, but that there is an absence of a better calling elsewhere to take its place. In India, agriculture is not just an occupation; it is a way of life to an overwhelming majority of the population. Then there is an incredibly large rural indebtedness that chains the peasant to their mortgaged homesteads. Even if the average agriculturist is ready to forsake his traditional calling, there is no guarantee that he can make a living, such as it is, otherwise. Availability of, as well as adaptation to, a new vocation is neither easy nor smooth.

However, during the lean years a migration from villages to towns does take place. It is not a voluntary and willing movement. Only economic pressure of the worst kind forces the agriculturist into the city in search of a job—any job—to earn a livelihood. He hopes that it is only temporary and longs to return to the village. Hence he leaves behind his wife and children and goes to the cities. The familiar rural hovel is exchanged for a strange tenement in a city slum. The temporary nature of this rural exodus is responsible for the unfavourable sex ratio in industrial cities. The crowding of men without wives and children in impersonal industrial cities encourages prostitution and other social vices.

Certain social factors also contribute to the essential home-loving character of the Indian people. Caste, language, and the diversities of regional and communal mores render severance from home, village or town uncomfortable. Migration to another province, region or even to a city in the same province may mean an unfamiliar life among "strange" people, albeit Indians, who may speak a different language, eat a different kind of food and may have different habits and customs. This disinclination to move is being strengthened considerably by the rising tide of obscurantist provincialism and narrow linguistic loyalty in India.

Finally, migratory tendencies are exhibited largely in small units of population. The smaller the unit of population, the greater the proportion of persons born elsewhere. The fact that India shelters more than 400 million people militates against any free mobility of the population, although this may seem paradoxical. Forsaking traditional homes and farms in favour of distant places is fraught with psychological difficulties, even though the new homes may promise relative affluence. And, above all, the prospective emigrant must be educated and be aware of a better life elsewhere, beyond his village, city or province.

In these circumstances, internal migration offers no substantial relief from population pressure. And the partition of the country, which has already forced upon both India and Pakistan communal migrations, renders the prospect of further inter-provincial migration dim, unless a series of Five-year Plans oriented towards large-scale industrialization can create an industrial "pull" in different urban areas.

Indian Emigration

What about external or international emigration outlets for the Indian population? The world's total land area and resources and the necessary technology for harnessing these resources are not distributed according to the numbers and needs of various nations. The world as a whole presents the spectacle of hungry and overcrowded people on the one hand and relatively rich and thinly populated lands on the other. While emigration from certain over-populated countries to some thinly populated ones, under certain conditions, may offer some relief to the sending countries and may be beneficial to the receiving countries, there

are countless difficulties of an economic, cultural and political nature in the path of such population transfers, especially for the overcrowded Asian peoples.[18]

Today, there are no emigration outlets for our people. We cannot wait for some day in the distant future when countries such as Australia or Brazil or Canada may throw open their doors to Indians and other Asians. When, and if they do, they will offer to admit only a small quota as a token of good will. India's net annual addition is more than 8 million people and it is very doubtful if any country, no matter how thinly populated she may be, can receive seven or eight million emigrants every year. While substantial transfers of population are not impossible, the short range financial implications of such population movements would be formidable.

In ancient times, India was a great seafaring nation. Her people voyaged to distant lands taking with them her novel manufactures and peaceful religious ideals. She once colonized parts of present South East Asia. But those emigrants of the distant past went in search of adventure, trade and because of missionary zeal, and not because of any population pressure at home. However, during the last one hundred years, Indians have emigrated to various parts of the world, particularly to countries within the Commonwealth, in search of employment and a better standard of living. The total number of Indians settled permanently abroad is only about 5 million and their lot is not always a happy one. Again, if these countries did receive Indian immigrants on a more liberal scale they could not absorb more than a fraction of the annual increase of India's population. Therefore, in the present international context, our population problem must be solved within our geographical confines.

[18]A discussion of this subject in some detail can be found in S. Chandrasekhar, *Hungry People and Empty Lands* (London, Allen & Unwin, 1955). Third edition.

CHAPTER 4

Birth Control—Moral and Religious Aspects

A Population Policy for India

SOME forty years ago John Maynard Keynes wrote, "The time has already come when each country needs a considered national policy about what size of population, whether large or smaller than at present, or the same, is more expedient. And having settled this policy, we must take steps to carry it into operation."[19]

How about a population policy for India? What could be the optimum size of India's population? The question of how many people there ought to be in our country can be answered in many ways, depending upon the criteria adopted. A population policy —either expansive or restrictive—could be formulated from many points of view, particularly from the point of view of what would be "best" for our people. And what would be "best" could be viewed from the demands of the Ministry of Defence for soldiers, sailors, etc.; of industry for cheap and plentiful labour, of imperialists for colonists; of optimum social welfare needs for individual citizens, etc. The question of quantity would normally continue to be the major problem. The most desirable quantity of population is also the one that attains the maximum production, highest standard of living, political stability, economic security and adequate freedom and leisure for the pursuit of cultural values.

Theoretical controversies on the definition of "optimum" apart, there is such a thing as an optimum size of population for every country. "One could not carry on a high modern civilization in a population the size of a bushman tribe, anymore than life could evolve the mental powers of a higher mammal in an organism the size of an amoeba. There is, however, an optimum range of size for every human organization as for every type of organism.

[19]J. M. Keynes, *The Economic Consequences of the Peace* (London, 1920), p. 8.

A land animal ten times the weight of an elephant would be biologically extremely inefficient just as a committee of two hundred members would be socially extremely inefficient."[20] What then should be the quantitative optimum for India? In general, it seems to be reasonable to assume that a population policy for India as far as gross numbers are concerned should be directed towards maintenance of population at a fairly constant level—in preference to either rapid increase, as is happening today, or rapid decrease. While this seems advisable from the modern political, economic, social and military points of view, such a quantitative optimum appears to be a number much smaller than the present population of our country.

But quantity is of importance only as a means and as a foundation for quality. This qualitative improvement of a population from a genetic point of view—eugenics—can be positive and negative. While social agreement is not always possible on the positive aspect of the most desirable type of human being, national and social agreement on the negative aspect is easy and readily available. No argument is needed to prove that our society would do well to cure or rehabilitate its imbeciles, its insane and its habitually anti-social elements. Anyone who is familiar with our public health and hygiene, our morbidity and educational statistics, need not be told that from the qualitative point of view our population needs to be toned up. Eugenical argument apart, it is quite possible that the poor quality of the population may be due more to undesirable health and educational conditions than to bad heredity.

From the point of view of the irreducible requirements of decent human existence, our resources as they are available today are way behind our needs. As for food production alone, all our efforts today are directed toward making our country self-sufficient at the *present* low standard of nutrition and not at some desirable higher level set up by nutrition experts. The question that arises now is how we can be both self-sufficient and raise our standard of living when our population is growing. We cannot run with the hare and hunt with the hounds. If we cannot increase our production tremendously we cannot afford to increase our popula-

[20]Julian Huxley, *UNESCO: Its Purpose and its Philosophy* (Washington, D.C., Public Affairs Press, 1947), p. 15.

tion unless at the cost of depressing further our admittedly low standard of living. So from quantitative and qualitative points of view a principal aim of our policy should be to stabilize our population at some manageable figure—that is, decrease the present number or, at any rate, not add considerably to it.

Birth Control

The last and the most important solution to our population problems is Birth Control or Planned Parenthood. It is too late in the day for India to discuss the *pros* and *cons* of birth control. The arguments for and against contraceptives have been advanced *ad nauseam*. Great minds have debated the question threadbare long ago and have given a verdict in its favour; this has been the scientific verdict as well. And yet, we find our people and newspapers debating this question today as if something new had just been discovered. And the ignorance and heat the contestants and correspondents display and generate on the question are almost unbelievable, though the area of agreement on the desirability of Birth Control for India is steadily increasing. Therefore, it may serve a useful purpose if some of the objections and arguments that are still raised against birth control in India are answered here.

What is Birth Control?

What is birth control? It is one of those strikingly significant and revolutionary human discoveries that happily resolve an acute dilemma in terms of human emotions, instincts and passions, arising from the dual aspect of the sex impulse in human beings. It is in resolving this dilemma that birth control has introduced a new and vital element into all demographic discussions affecting the individual family and its happiness, national numbers and welfare, and international amity and peace. It offers a relatively simple solution to the problem presented by two distinct and sometimes opposite human impulses. One is the desire for mating and the other the desire for offspring. The increase or decrease of human populations revolves on the axis of these two impulses. (Most animals and all plants have no desire for offspring). But where does the conflict arise? If human beings want mating as well as its natural consequences—children—both impulses work

harmoniously and there is no problem. But, sometimes, for economic, health or social reasons people do not want children but do not want to renounce mating. Acute problems of emotional strain and sometimes even physical impairment arise in intimate human relations when husbands and wives desperately want mating but definitely do not desire children. As the American sociologist H. P. Fairchild sums up this conflict: "If people yielded to their desire for mating they had to take their chance of offspring, wanted or unwanted. If they tried to be governed by their desire for children, they had to face the frequent renunciation of sex gratification. Children that you did not want or no sex pleasure that you did want."[21] No wonder Malthus talked about misery!

Birth control is an answer to this conflict. However, the term "birth control" for the practice is not a happy one, for it does not so much control births (as abortion does for instance) as it does conception. This distinction is of great importance, for birth control as advocated and adopted all over the civilized world strictly means the prevention of conception and is therefore naturally opposed to abortion both in theory and in the policies and programmes of its champions.

This explanation should silence one of the usual Catholic arguments against birth control that it is nothing but an "embryo murder". Where there is no conception there is no embryo and the question of its murder therefore does not arise. However, the term birth control was coined by Margaret Sanger, that doughty American pioneer and champion, and has come into popular vogue and usage, despite its scientific inexactitude.[22]

Thus, birth control can bring parenthood under voluntary control. As Mrs Sanger puts it: "Parenthood should be regarded as a fine commission, a noble trust and a splendid assignment and it can be so considered only when it becomes a conscious responsibility." Thus, in the grand tradition of science, birth control, like the control of infection by asepsis, the control of pain by anaesthesia, the control of communicable diseases by the methods of preventive medicine, is another step in mankind's

[21]H. P. Fairchild, *People* (New York, Henry Holt, 1939), p. 60.

[22]Mrs Margaret Sanger coined the term "Birth Control" in *Woman Rebel* (New York, April, 1914).

mastery over the blind forces of nature, a measure of his civilization and growth to maturity. This device has so revolutionized our views of marriage and morals, peace and war, that Sir Julian Huxley puts it on a par with such decisive but seemingly simple inventions as the making of fire and the art of writing. It has brought into human affairs a set of new factors that will cause far-reaching social, economic and political changes—changes that may alter the course of war, the continuation of peace or the very survival of our species. When the knowledge of birth control seeps throughout the world and permeates the cultural mores of every stratum of our society, it is ultimately bound to cause a revolution more penetrating than all our contemporary political movements. It may eventually help to make war, a periodic preoccupation of man in destroying his own species, an ugly memory of the past like that of cannibalism and witch-burning, and make peace a permanent possibility.

Despite the importance of birth control, or perhaps because of it and the power inherent in it, the subject has always been and is even today discussed with the greatest possible ignorance, bias, prejudice and preconceptions. It is still denounced and discouraged by certain national governments and by the Roman Catholic Church. It is declared illegal in certain nations and states and is even debarred from discussion in certain groups. The very idea of controlling conception appears to be so novel and revolutionary that some states banish all information about it on various fantastic grounds, beginning with concern for the citizen's morals and ending with the contemplation of a pathetic picture of what a poor planet this world would be with practically no people on it. This attitude is only an illustration of the unscientific outlook that offers resistance to any innovation or reform without even stopping to think whether it is beneficial or not.

The truth is that birth control, in the sense of population control, is as old as man. For nearly three and a half thousand years, man has known after a fashion not only how to control births but also how to control conception. One of the oldest methods of birth control, that of *coitus interruptus*, is mentioned as practised in the times of Genesis and Herodotus. Dr Norman Himes points out that two contraceptive practices were found in

Kahun Papyrus (1850 B.C.) and Eber Papyrus (1550 B.C.).[23] Mankind has thus been controlling population in one way or another, mostly by such methods as celibacy, delayed and ascetic marriages, abortion or infanticide for a long time. But birth control in its modern sense is only a century old. And only within the last half century have satisfactory methods been developed. And though perfection is yet to be attained, safe and effective means are at our disposal today.

Is Birth Control Immoral?

The first and foremost objection to contraception is that it is immoral. Morality from the etymology of the word itself is a matter of custom, and varies from age to age, and from one culture to another. The morals of any society rest on what that society, at some particular stage of its development, thought wise and beneficial for the welfare of its people. Morals are therefore man-made and as such they can never be static or absolute. In all cultures codes of morals change with the changing needs and outlook of the people. Many practices and institutions which have the moral sanction of society behind them today were at one time or another considered immoral. On the other hand, any number of practices and institutions which were once considered proper and moral are considered today immoral, primitive or unhealthy. *Sati*, the ban on widow remarriage, polygamy—a number of examples from Indian social experience alone can be cited. After all, progress and change are the life-blood of a civilized and thoughtful community. "Nothing is so subversive to society as a blind adherence to habit and practices which survive by mere inertia." Conventions and laws must be made and unmade as the times require. Pearl S. Buck, pleading for birth control, points out: "If we are not able to live under the codes of our forefathers, it is not because we do not want to, but because life has changed so that we cannot, and we want help. The harm to the spirit comes not in the change, but in having to pretend that there is no need to change. But pretence which is today not yet hypocrisy so much as the refusal to face truth and the fear of

[23]Norman E. Himes, *Medical History of Contraception* (London, Allen & Unwin, 1936), pp. 59 and 63.

life and change, will inevitably degenerate into actual hypocrisy as time goes on, and nothing is more devastating to the human heart and mind than hypocrisy."[24]

Whether the practice of birth control is moral or immoral is not a matter of objective fact but one of subjective attitude. And there is no unalterable finality about it. Some aspect or other of our moral code is sometimes bound to be at variance with the larger political, social and economic needs of society. If a new approach, device or institution is found to be in opposition to our notion of good morals, it is not wise to reject the socially useful innovation but to alter our morals. As an American advocate of birth control once put it, in reply to the charge that it is immoral: "Of course it is immoral, but it is socially useful. Therefore, we propose to make it moral."

Does Birth Control Promote Sexual Immorality?

Those who are opposed to birth control—and there are still many in our country—maintain that it promotes immorality. In our country, some associate the practice of birth control with easy romanticism, loose sex life and liberal morals. According to these critics, overt immoral conduct, especially among young unmarried people, particularly girls, will be encouraged since the fear of consequences, namely, the arrival of children, is absent. A lurid picture is painted of what would happen; the temptation to illicit intimacies would be made greater; the process of seducing innocent girls would be made easier; the ever-present lure of prostitution to the under-paid girl worker would be made more difficult to resist, if only an assurance would be felt that the arrival of a baby, hitherto a generally prevalent and effective deterrent, could be prevented by the popularization of cheap contraceptive techniques.

In answer to this argument, it must be pointed out that much cannot be said for morals born out of fear. Without trespassing on the realm of criminology, it may be said that fear after all is not such a deterrent. It is open to doubt whether fear is a more effective deterrent in this respect than in the field of crime.

[24] *Pearl Buck speaks on Birth Control* (New York, Birth Control Federation of America, 1936).

Certainly there can be no great claim to righteousness on the part of those who are prevented from "sin" only by fear. We need not praise cloistered virtue and morals born out of fear. On the contrary, birth control can raise the "moral level" of a society to a higher level, for it will reduce the great number of illegitimate births, or rather, illegitimate parents. We have today all over the world illicit intimacies and their consequences of unwanted and unloved children whose economic and social heritage is nothing but poverty, wretchedness and social stigma. In other words, we have both illicit unions and their undesirable consequences—unwanted children. But, if contraception became popular it would at least abolish the problem of unwanted children, even if it did increase at the beginning the ever-existing, age-old problem of clandestine relations of the unmarried or extra-marital relations.

Every socially necessary device or institution is bound to be abused by a minority. But the abuse of a socially useful device is no argument against the device itself. We do not condemn razors, useful for shaving, because a few use them to commit suicide or homicide; nor do we close up our tanks and wells because some people are drowned in them.

Is Birth Control Unnatural?

Some contend that birth control is unnatural. The term "unnatural" as used in this customary objection means "interference with natural processes by an outside human agency". In this sense, the whole life of man, from the cradle to the grave, is unnatural. All civilization can be summed up as a bold and daring interference with nature. From our morning shave and shower, clipping finger-nails and cropping hair, our elevators and escalators, bridges, boats and aeroplanes, dams and mines, rockets and radar, radio and television, not to mention clothes and cooking—all are rude but necessary interferences with nature. Not only does our civilization rest on these interferences, but we take pride in having conquered the blind forces of nature and having harnessed them in the service of man. Should we allow nature to take her own course, we should undo thousands of years of human progress and revert to the most primitive level of existence.

In other words, those who advance this objection of unnaturalness would have us revert to the level of animals, for animals largely adapt themselves to nature, whereas man has progressed beyond the animal level by his "interference" with nature. Further, if it is permissible to interfere with nature in other fields, why should we not be "unnatural" in the most intimate aspect of our personal lives—that of reproduction? Why should human reproduction alone be left to the casual vagaries of nature's primordial impulses and animal instincts? On the contrary, this interference with the normal processes of nature should be welcomed, based as it is on planning, foresight and control. It is a victory for human intelligence to have subdued the most important of all our biological processes—that of reproduction. In a word, there is neither logic nor reason in this objection.

Does Birth Control Promote Self-Indulgence?

Does birth control promote self-indulgence? Some assert that birth control is a gospel of self-indulgence. Is it? Self-indulgence means lack of restraint, licentiousness and almost libertinism. Today, in most civilized countries, young men and women often refrain from marriage for economic reasons. They feel that their financial stability is not strong enough to warrant the arrival of children, which a married life "naturally" entails. But some young men, being what they are, are forced to seek other channels as outlets for their normal and natural cravings. This, among other reasons, gives rise to a professional class of prostitutes to cater to the physical needs of these youths who cannot afford to marry because marriage normally means children. In these circumstances birth control will be a positive help, because young people can get married, lead normal and happy lives and regulate the arrival of children in accordance with their economic resources, In fact. the wide adoption of birth control will increase legal, normal and happy marriages and reduce vice.

Moreover, in matters of sexual relations, who can say what is moderation? Can we ever devise a yardstick to measure this? Can we lay down the number of times a man may have sex intimacies with his wife? Just because contraceptives prevent the possibility of pregnancy, we need not expect husbands and wives

to indulge in sex without any restraint or restriction. Even if a couple permit themselves coitus only once a year, it could be quite enough to ensure their having a baby every year. And to their neighbours they may appear to be doing nothing but bringing forth children.

Is Birth Control Irreligious?

Some religions and religious leaders are opposed to birth control. It is not necessary for our purpose here to review the attitude of every known religion towards this question. In general, the religious objection to birth control is based on the fear that the followers of other religions may outbreed the followers of the particular religion in question. As long as the "Lord fights on the side of the largest battalions" and as long as mere numbers serve as a criterion of the worth, value and validity of a particular creed, this fear will continue to persist. The religious idea that marriage is a sacred institution and that every one should enter into it early and beget as many children as possible reflects the underlying assumption that large numbers are necessary to propagate and glorify their particular creed, for most religions believe themselves to be the truth and the sole truth at that.

But even here, of late, the attitude of certain religions has shifted in favour of birth control. Orthodox Jews condemned the use of all contraceptives until 1930, when the General Convention of American Jewish Rabbis endorsed birth control. Nearly all the Protestant Churches have given up their erstwhile opposition and have recommended and even encouraged contraception in the interest of individual health and international peace. For example, the Lambeth Conference of the Federal Council of Churches of Christ in America, which in 1908 "viewed with alarm the artificial restriction of the family", reversed its stand in 1930 and endorsed birth control.

Christian Theology and Contraception

As a majority of the world's peoples profess, at least in a formal sense, some religion or other, institutionalized or otherwise, and are normally guided by the directives of such religions, the theological basis of such directives assumes some importance. So

long as the pattern of human behaviour, including the sex aspect, is conditioned and moulded to a considerable extent by the beliefs behind the permissive and prohibitive directives of religion, an understanding of the origins of such directives is of some value, particularly to those who are interested in promoting a change in these directives.

The teachings of almost all traditional religions have sought to distinguish between the *motive* of an act, the *act* itself, and its *consequences*. While the medical and the social scientists are primarily concerned with the good or bad consequences (for health of the individual or society) of the sexual act, the moralist is interested in the motive of the act from the point of view of man or woman or both, and the theologian is chiefly concerned with the act itself in the sense of the fulfilment or frustration of the objective of the act.

While it is not necessary for our purpose to examine the possible theological basis of all religions to contraception, the attitudes of Christianity, Hinduism and Islam towards contraception deserve brief examination. According to the Christian doctrine of creation, God made man in His own image and gave the human body certain organs obviously to perform certain functions. The object of each organ is to perform its specific function. Since God has given these organs and since it is man's duty to do the will of God, he is expected to use these organs to fulfil their functions or objects. It follows, therefore, that the eye must see (we should here leave aside the question as to what the eye should see) the ears must hear and the genital organs must perform their functions. It appears, therefore, that any act which deliberately frustrates its function is a sin.

What is the object of any sex act? "The Biblical answer is clear", writes Canon Hugh C. Warner, "In Genesis 1:26 God is described as 'making man in His image'. In chapter 5 verse 2 this is clarified: 'Male and female created He them, and called their name Adam' (man). There is set out the fact that the basic sociological unit of humanity is not *that* man and *that* woman, but the man-woman nexus. Thus we are confronted with a relational 'unit' as the foundation element in the structure of human society—a fact which is not surprising when we recall that man is made in the 'image of God'; for God is relational.

Developed thinking about the nature of God has resulted in the doctrine of the triune relational nature of the Godhead. We may, in an analogical sense, speak of the bi-unity of man and woman—the male-female nexus. It follows that all Christian discussion of the place of woman (and man) in society must *begin* with the fact of this implicit bi-unity which may or may not crystallize in particular cases into the more specific and intimate bi-unity of marriage.[25]

"While many acts such as a smile, a handshake, a kiss or a caress effect a relation between two individuals, only coitus establishes a 'one-flesh' relationship. Both Genesis and St Paul talk about this one flesh unity or *henosis*. According to the Bible, once coitus, based on mutual consent, has taken place, the bi-unity of man and woman has been effected and nothing could possibly change that relationship, whether it is that of marriage or adultery. According to one interpretation, that is what Jesus meant when He said: 'Whosoever shall put away his wife and marry another committeth adultery.' A remarriage of this sort adulterates the established relationship, but no more destroys it than adulterating milk with water destroys the milk—it merely changes its quality. Once coitus has established henosis (one flesh) something has begun to happen at the ontological level. So a husband and wife are always husband and wife until one of them dies, whatever the degree of disloyalty or desertion may be."[26]

While there is a degree of mutual consent, committment and responsibility whenever there is coitus between a man and a woman, the unity of "one-flesh" according to Christianity is valid only within marriage. Society decides the nature and the number of the conditions under which it shall recognize a marriage for the protection of present and future citizens. The State registers the marriage based on consent. And the traditional Christian doctrine has been that *consent* between the parties, not coitus (Concubitus), constitutes the status of marriage. But it is of course consent to concubitus.[27]

[25]Hugh C. Warner, "Theological Issues of Contraception", *Theology*, (London), January, 1954. [26]Hugh C. Warner, *op. cit.*

[27]Cf. The ends of marriage are set out in the Christian *Prayer Book* as follows: "Society, help and comfort" or in other words, parenthood, sexual union and companionship.

What then is the object of coitus? Henosis or procreation or both? The term "object" can be theologically defined in two ways: "The object is that at which the action aims and in which it naturally results and with the attainment of which it is completed" (Protestant); and "the object is that purpose or intention which is inherent in the action and characterizes it, whether the agent intends it or no" (Catholic).[28]

The obvious and direct object of coitus is the union or the male-female nexus or henosis. Procreation is the secondary object which is not always attained. Coitus during the safe period, and during pregnancy and after menopause cannot result in children. And if one accepts the Christian doctrine of Free Will, the doer must always take responsibility for deciding whether or not certain results of an action should be realized. Therefore, a husband may have coitus with his wife at certain periods without desiring procreation. Coitus can be purely a mutual personal enrichment of the husband and wife relation. God has endowed the organs. He has also endowed woman with a clitoris which has no other function than that of sensation directed to orgasm. If procreation is the only object of coitus God need not have given the clitoris, for clitoris and indeed orgasm are unnecessary for procreation. The orgasm is an enriching aid to the full realization of henosis.

The average man has realized a truth before which some Christians falter—the self-evident fact that sexual union should be enjoyed. Parts of our sexual equipment have no other function save to give exquisite pleasure. God or rather evolution has made them so. In other words, as Hugh Warner points out, it is possible to argue from the point of view of Christian theology that while procreation is the primary end of marriage, it is not necessarily the primary end of every act of coitus or that it is the "object" of coitus. An interpretation akin to this is reflected in the resolution of the Lambeth Conference of 1930 (the assembly of all the Bishops of the Anglican Church throughout the world) which sums up admirably the Protestant Christian attitude towards planned parenthood. To them, "It is axiomatic that parenthood is for married people the foremost duty; to evade or disregard that duty must always be wrong. It is equally axiomatic that the

[28]Hugh C. Warner, *op. cit.*

state of marriage is a divinely ordained relationship in which intercourse between men and women calls for the highest exercise of the Christian virtues of self-discipline, self-control and self-sacrifice . . . It follows, therefore, that it can never be right to make pleasure or self-indulgence the motive for determining to limit or refuse parenthood. Equally, it can never be right for intercourse to take place which might lead to conception where a birth would involve a grave danger to the health, even to the life, of the mother, or would inflict upon the child to be born a life of suffering; or where the mother would be prematurely exhausted, and additional children would render her incapable of carrying out her duties to the existing family . . . It will be admitted by all that there are circumstances in married life which justify, and even demand, the limitation of the family by some means."[29]

The Roman Catholic Point of View

The last remnant of organized opposition to scientific contraception, from the religious point of view, still comes from the Roman Catholic Church. Some of the general Catholic objections are those that have already been raised and answered. However, the Catholic opposition to contraception is based specifically on Pope Pius XI's Encyclical on Marriage. He warns us that "any use whatsoever of matrimony exercised in such a way that the act is deliberately frustrated in its natural power to generate life is an offence against the law of God and of nature and those who indulge in such are branded with the guilt of a grave sin."[30]

Nevertheless, in fairness to the Catholic Church, it must be pointed out that *today* their quarrel is not with the end of controlling conception but with the means—that of scientific contraception. They advocate moral restraint in marriage and if this ideal is unattainable they advise married couples to resort to the "safe period". The safe period or rhythm method of birth control itself was permitted by Pope Pius XI in his Encyclical on

[29]*The Lambeth Conference* 1930 (London, S.P.C.K., 1931), pp. 90-91. A recent book *The Population Explosion and Christian Responsibility* by Richard M. Fagley, (New York, Oxford University Press, 1960), offers an objective examination of the problem.

[30]Pope Pius XI's *Encyclical on Christian Marriage* (1930).

Christian Marriage issued in 1931 when it became clear that millions of Catholics all over the world were resorting to contraceptives for economic and health reasons.[31]

The "safe period" is based on the biological fact that during certain days of the menstrual cycle, the woman is incapable of conceiving. If sexual relations, therefore, were confined to these sterile days of the month, conception would (presumably) be prevented.

The general concensus of medical opinion today, however, is that while there does seem to exist a sterile and fertile period during each menstrual month, the "safe period" is not a dependable method of contraception. Apart from the temperature method with all its uncertain limitations, we have no means as yet of determining for the individual woman the exact period when her sterile days occur. The sterile period seems to differ from woman to woman and occur at irregular periods in the same woman. This renders the calculation of the "safe period" uncertain and makes the method unsafe.

The reason behind the official sanction of the Roman Catholic communion of the "safe period" is that it is "natural", unlike artificial (scientific) contraceptives. It is contended that the "safe period" method of birth control does not interfere with nature. But according to a Protestant Christian view it is pointed out that "to regulate the sexual life of marriage by the calendar is to introduce a strictly extraneous factor which involves 'interference with nature' of another kind. To disallow as unnatural a method of contraception because it prevents the semen from reaching the womb (whether or no an ovum is there to be fertilized) and to sanction a method by which intercourse will frequently be excluded at times when both husband and wife greatly desire it, suggests a conception of 'nature' in purely physical terms."[32]

[31]The Encyclical says, "Nor must married people be considered to act against the order of nature if they make use of their rights according to sound and natural reason, even though no new life can thence arise on account of circumstances of time or the existence of some defect." The circumstance of time apparently refers to the safe period.

See also, Leo J. Latz, *The Rhythm of Sterility and Fertility in Women* (Chicago, 1944).

[32]Gilbert Russell, *Men and Women* (London, S.C.M. Press, 1948), p. 96.

However, the followers of the Catholic Church are finding it extremely difficult to follow the Pope's Encyclical, for it is estimated that Catholic women in the United States of America, for example, attend the birth control clinics in about the same ratio to the total population as non-Catholic women. In the United States, according to a public opinion survey published by *Fortune* Magazine (1944), 70 per cent of the Catholic women between the ages of 20 and 35 expressed the belief that birth control information should be made available to all married women. The Catholic birth rate in America falls and rises at about the same rate as it does in other religious groups of the same educational and socio-economic status. As for the well-known low and declining birth-rate in Catholic France no pointed reference is needed here. The French Government has not banished contraceptives but has rather offered social security measures to French couples to induce them to have large families without serious economic handicaps. It has been found in all advanced countries that babies cannot be had at bargain prices.

Let us, therefore, hope that the Catholic Church will find it expedient to modify its present stand on birth control in keeping with the growing needs and silent demands of its followers. It is true that the Catholics in India constitute a tiny minority (according to the 1951 census, Hindus form 84.9 per cent while Christians —Catholics and Protestants—formed only 2.3 per cent of the total Indian population) but the attitude on this question presents a serious difficulty to millions of Catholics in other parts of the world.

Nevertheless, there is a great need for tolerance and understanding and no place for impatience with the attitude of the Catholic Church on this question. There is no doubt that this matter is receiving the most careful and deep attention of the highest quarters of the Catholic hierarchy. The Pope in his message to the delegates of the United Nations World Population Conference in Rome (September 1954) pointed out that the Church was not unaware of the "agonizing aspects" of the problem of overpopulation and unwanted children. The Pope observed: "The science of population is young but it is basic because it is immediately concerned with human life and it can illuminate certain of the gravest individual and social problems.

"The Church is not unaware of these problems; she is not indifferent to their agonizing aspects as is proven by the documents recently coming from the Holy See concerning family life, national economy and the relationship between peoples, some of whom find themselves abundantly provided with wealth while others remain in tragic conditions.

"The Church has always understood how to place population problems in their true perspective: that of a moral, personal destiny, which by means of courageous, even audacious, action, in time, must find its fulfilment in the eternal possession of God."

How About Moral Restraint?

Mahatma Gandhi's attitude toward birth control is well known. To him, "There can be no two opinions about the necessity of birth control. But the only method handed down from ages past is self-control or *brahmacharya.* It is an infallible sovereign remedy doing good to those who practise it. The union is meant not for pleasure but for bringing forth progeny."[33] Again, he says, "It is one thing when married people regulate so far as it is humanly possible the number of progeny by moral restraint and totally another when they do so in spite of sexual indulgence. In one case, people gain in every respect. In the other, there is nothing but harm."[34] Gandhi continues elsewhere, "I have felt that during the years still left to me, if I can drive home to women's minds the truth that they are free, we will have no birth control problem in India. If they will only learn to say 'no' to the husbands when they approach them carnally . . . the real problem is that they do not want to resist them." The Mahatma's writings in a similar vein can be multiplied.[35]

However, it is clear that Gandhi believed in the need for controlling births but did not approve of the use of contraceptives. He granted the ends as desirable but objected to the available scientific means. To him, sex intimacies without the end result

[33]Mahatma Gandhi in *Young India,* 26th April, 1928.

[34]Gandhi, M. K., *Self-restraint v. Self-indulgence* (Ahmedabad, Navjivan, Publishing House, 1947), *passim.*

[35]R. K. Prabhu and U. R. Rao (Eds.), *The Mind of Mahatma Gandhi* (Madras Oxford University Press, 1946).

of children were almost a crime. While he was anxious to give relief to women from excessive childbearing, he felt contraceptives dangerous to the moral and nervous health of the community. Of course, he did not wish us to adopt the old wasteful method of childbearing when we produce six or eight and only three survive. For him, the best means towards the desirable end of family limitation was sexual abstinence. Gandhi, therefore, ardently and sincerely advocated moral restraint as the only acceptable solution for India.[36]

What is more, he advised the wives in India to say "no" to their husbands, when husbands in India, as husbands all over the world, are ever eager to assert their so-called rights. The Mahatma himself, in his happy married life, took nearly thirty years, on his own admission, to sublimate his sexual energies and passions into nobler causes and successfully practise continence. In 1936 Mrs Margaret Sanger asked Gandhi if it wasn't surprising that he could ask the millions of India, who are so humble and weak, to follow this advice of moral restraint when the much stronger and wiser Gandhi himself took years to bring that self-control into his own life.[37] It is well-nigh impossible for a healthy married couple living together to abstain from sexual intimacy for any long period because they do not want children for economic or other reasons. The Mahatma seemed to have thought that in matters of sex, man alone was the rebel, and woman was at best a passive partner. That was probably why he exhorted the Indian women to resist the overtures of their husbands. But does every woman meekly submit merely as a chattel for man's pleasure? Women have feelings as fine, deep and amorous as men. There are times when wives desire physical union as much as their husbands do. Under such circumstances, should the husband learn to say "no"? Everybody cannot be saintly, and were it possible, such saintliness in this connection might not always be worthwhile on health and psychological grounds. Lord Dawson points out: "To limit the size of a family, to, say, four children would be to impose on a married couple an amount of

[36]For Pandit Nehru's sceptical comments on Mahatma Gandhi's views on Birth Control, see *An Autobiography* (London, 1936), pp. 512-13.

[37]"Gandhi and Mrs Sanger debate Birth Control", *Asia* (New York), November, 1936, pp. 698-702.

abstention which for long periods would almost be equivalent to celibacy; and when one remembers that, owing to economic reasons, the abstention would have to be more strict during the early years of married life, when desires are strongest, I maintain that a demand is being made which, for the mass of people, it is impossible to meet; that the endeavours to meet it would impose a strain hostile to health and happiness, and carry with them grave dangers to morals. The thing is preposterous. You might as well put water by the side of a man suffering from thirst and tell him not to drink it. No; birth control by abstention is either ineffective, or if effective, pernicious."[38]

Apart from its doubtful practicability from the point of view of our work-a-day, rural millions, is moral restraint advisable from the medical point of view? Some believe that preaching prolonged abstinence is as absurd as suggesting the cutting out of the stomach as a cure for hunger. There is a school of medical opinion which contends that continuous continence on the part of married couples leads to undesirable results, both physical and psychological.

The Hindu View

It would be idle to expect any definite and direct guidance from ancient Hindu or other scriptures on all specific modern problems. They could not have possibly anticipated all the pressing and tragic needs of our atomic age; nor could they have provided for every conceivable situation. Secondly, while there is need for a proper and progressive interpretation of the Vedic injunctions, understanding more the spirit than the letter of the law, it would be misleading to read more than what is implied in the Hindu scriptures. While one should resist the temptation of intellectual ingenuity in finding religious and moral sanction for every modern practice and institution in ancient scriptures, one should not, at the same time, fail to comprehend the civilizing spirit and purpose behind the moral law. As Professor Radhakrishnan points out, "The Hindu *dharma* gives us a programme of rules and regulations and permits their constant change. The rules of *dharma* are the mortal flesh of immortal ideas and so

[38]Lord Dawson, *Love, Marriage and Birth Control* (London, 1921), p. 22.

are mutable."[39] Social flexibility has been the essential characteristic of Hindu *dharma* as given in the *Vedas* and the *Dharma Sastras* and as interpreted by the commentators through the centuries. This flexibility has been reflected in the workable dichotomy of all moral law into the ideal and the permissible, the essential and the accidental.[40] While the moral and the spiritual ideal is before all of us, the ideal way of life is realised by a score of saints, the permissible way of life for the humble millions of the world. It is this realistic understanding that has contributed to the continuity of Indian culture through some six thousand years and more.

The Hindu way of life enjoins the attainment of *parama purusartha*—the supreme end of life, through the fulfilment of the four-fold purpose of life—*dharma* (ethical duty), *artha* (the economic), *kama* (the sensuous) and *moksa* (the spiritual). An individual fulfils these necessary obligations of a good life through the four stages of life (the *caturasrama*) which are the *Brahmacharya* (the celibate student), the *grhasta* (the householder), the *vanaprasta* (the forest-dweller) and the *sanyasa* (renunciation).

Every good Hindu must perforce go through these four stages. To begin with, he must be a student. It is ideally a stage of chastity and celibacy and the quest is for knowledge and learning. And when the student finished his education he was advised to marry and "not to cut off the thread of offspring". The stage of the married householder was an important one. The Hindu concept of marriage is that of a sacrament and not of a civil contract. In Hinduism, marriage is not only permitted but praised. It is not merely a physical release but a spiritual necessity. Man is held to be incomplete and only half his self till he takes unto himself a wife. Man and woman are complementary and are meant for mutual union and not for separate existence. In fact,

[39]S. Radhakrishnan, *Religion and Society* (London, Allen & Unwin, 1948), p. 108.

[40]"Mahatma Gandhi approved only moral restraint and condemned scientific contraceptives. But Gandhi has always distinguished between the ideal and the permissible. If you cannot resist evil by non-violence, cowardice is worse than non-violence. But resistance to evil is essential. The ideal is resistance by non-violent means. But the permissible is resistance by violent means." S. Radhakrishnan, "Inaugural address", *Proceedings of the Third International Conference on Planned Parenthood* (Bombay, 1952).

the Vedas condemn prolonged celibacy. Marriage is necessary for a woman at sixteen and a man at twenty-five. The Vedas do not advocate child or early marriages. If marriage is extolled it is because it fulfils a necessary stage in the evolution of a good life and enables one to pass on the torch of life and perpetuate the family line. It must also be realized that the period of the housholder—the *grhasta asrama*—did not last throughout life, not even till the end of the normal reproductive period, for the householder had to enter the *vanaprasta* and *sanyasa asramas.* The sex life and the reproductive period of the Hindu male were thus regulated and restricted by innumerable do's, don'ts and taboos.

There are innumerable directives about when sex union is and is not permissible and how many children one should have.[41] We find in the *Rg Veda* as well as in the *Yajur Veda*, for instance, a *mantra* addressed to Indra by the bridegroom during the marriage ceremony. It says: "Oh Indra! Make the bride the mother of good and lucky children. Bless her to get ten children and make the husband the eleventh one."[42] While ten children may be too many for any couple today, it was probably considered something of an optimum during the Rg Vedic times. But the point is, that when a wife begins to treat her husband as the eleventh child there is some control of the family size. Vatsyayana in his *Kama Sutras* (4th century A.D.) and Manu in his *Dharma Sastras* (*circa* 600 B.C.) lay down clearly when a husband should meet his wife physically. The *Kama Sutras* gives elaborate and ardent details of sex intimacies and different poses and postures and

[41]It is well known that most Hindus abstain from sex relations for various religious and ceremonial reasons, particularly on religious days. Many Hindus observe continence during pregnancy and lactation, the period ranging roughly between six and twelve months. The orthodox Hindu principle and hygiene and ceremonial ritual demand abstention from coitus during different periods. "Sexual intercourse is prohibited for the first four days after the appearance of the menstrual flow, as well as on the 8th, 14th and 15th days of both the fortnights—light and dark; on the anniversary days of dead parents, nights previous to the anniversary, on *vyatipta* (the seventeenth of the astrological yogas), *varidhrata* (the twenty-seventh of the astrological yogas), *sanskranti* (the passage of the Sun or planetary bodies from one sign of the zodiac to the other), in the day time, at sunset, at midnight and during an eclipse." Sir Bhagvat Sinh Jee, *A Short History of Aryan Medical Science* (London, Macmillan, 1896), p. 73.

[42]imam tvamindra! midhvah! suputram subhagam kuru
dashasyam putranadehi patimekadasham krdhi.

describes both chemical and occlusive methods of birth control.[43] The *Brhadyoga Tarangini* (8th century A.D.) offers specific recipes for the occlusion of the cervix. In *Brhadaranyaka Upanisad* (*circa* A.D. 200) we are told what rituals to perform to beget intelligent and lovely children and what mantras to be uttered to prevent conception. Thus, in a way, the problem of our times was anticipated, if it did not exist even then to the same degree, and a solution in the light of the knowledge of that day, was offered.[44]

Though there is this Vedic injunction asking a Hindu mother to bear ten children and then treat the husband as the eleventh child, it is also true that a later verse says that only the first child is the product of *dharma* and subsequent children are the product of *kama* (lust). The Sanskrit word for son is *putra* meaning one who delivers the parents from the hell called *puth*. If a Hindu, therefore, wants to be redeemed from this unhappy destination, he must have a son, but not a dozen children of whom only four or five will survive. To the Hindu religious injunction that one should have at least a son to perform religious rites at one's death, the superstition of the desirability of a large number of children was later on added. As Gandhi pointed out, "the superstition of a large family being an auspicious thing and therefore desirable" still persists in many parts of India among all the communities.

The real truth, however, is that while our ancients did give considerable thought to problems of human fertility and reproduction, there is nothing specifically against birth control in the Hindu scriptures.[45] Hinduism is not opposed to planned parent-

[43]Most Hindu temples depict both in the lower ridges and in the holy of holies series of sculptures of poses (*bandha*) of the union of man and woman (*mithuna*). The implication of these masterly depictions of the spirit of physical absorption is that, before a Hindu can be initiated into the life of a devotee he must go through all earthly pleasures including the raptures of the body which is considered the temple of God.

[44]No serious study of the pattern of Hindu sex behaviour on the lines of Kinsey studies is available. Were such studies to be undertaken they might confirm the practice of these taboos even in the present day. The provisional results of a small sample survey conducted by the United Nations in some Mysore villages confirm the practice of these taboos on sex relations.

[45]The Registrar General of India points out, "If we recall the fact that only recently the World Health Organisation felt compelled to avoid even considering the subject (contraception) we must count it a fortunate circumstance that the religious faith of most of our people (Hinduism) is not bound up with this taboo." *Census of India* (1951), Vol. 1 (New Delhi, 1953), p. 211.

hood though some obscurantists would like to summon the aid of our religion to support certain reactionary attitudes. In a word, Hinduism ordains that each question must be examined on its merits and ethics. Birth control, therefore, should be judged in the light of the purpose for which it is used. And no end can be more moral or desirable than the health of our mothers and the prosperity of the underprivileged.

It is obvious that if every Hindu followed scrupulously the do's and don'ts of Hinduism there would be no population problem in India. The fourfold *asramas* alone could regulate successfully the social and sexual life of the community on healthy and purposeful lines. But we are in a transitional flux. We are neither strict Hindus following the ancient code of our religion; nor are we sufficiently modernized to take to scientific contraception. While some would have us go back to Vedic times others would like us to march ahead to modern ideals. But as we are nearer to the present and the future than to the past, it appears infinitely easier to look ahead than to turn backwards. Fortunately, in this respect all great Hindu social reformers and teachers from Ram Mohan Roy to Radhakrishnan have been in favour of planned parenthood and no Hindu need run afoul of his conscience by practising contraception.

Through the years, whenever there was a conflict between the scientific outlook and the religious attitude, the former won, sooner or later. How often have we not compromised our religious beliefs in the face of modern needs. When science is summoned for death-control everyone is apparently happy; but when the aid of the same science is sought for birth control there is some protest and misgiving. What is astonishing is that the irrationality of this stand seems to escape many.

The Muslim View

The importance of the Muslim attitude toward family planning is obvious, for, despite partition, there are about 40 million Muslims in India. The total Muslim population of the world in 1950 was estimated to be about 320 million.

No special study of the demography of the Indian Muslims has ever been made and as such no reliable information on the

problems of differential fertility of the different communities in India is available. However, there is no reason to suppose that the problems of fertility, morbidity and mortality of the Indian Muslims are basically different from those of other communities.

Some of the fundamental features of the social and economic life in Islam as practised in India and some parts of the Middle East, such as social equality of all people, polygamy, divorce and a relatively better status for women in personal law, are well known. Some of these features as well as social traditions have encouraged large families in Islamic countries.

Some Islamic sayings give a clue to the general attitude: "When a servant of Allah marries he perfects half his religion", and "Marry and multiply so that I may be glorified in my community over other communities." "We remember how the disciples of Jesus disputed as to who should be the greatest. The Islamic version of this is the account that when the Companions disputed among themselves as to who was the best man, the Prophet replied, 'The best man is he who is a good husband.' Ibn Abbas is said to have asked Ibn Jubair if he were married. When he replied that he was not, Ibn Abbas said, 'Then marry, for the best man in our community is he who has most wives'."[46]

However, the fact that the Muslim faith has given in recent years a definitive and permissive ruling on contraception is not generally known. Islam, like Hinduism, and unlike Christianity, has no clergy, no church organization and no liturgy in the true sense of the term. Much of the personal law affecting birth, marriage, divorce, and dowry are regulated according to the *Shariat* (Islamic law) and the *Fiqh* (Islamic jurisprudence). But when doubts arise, a Muslim can ask for a ruling on any specific question. Such a doubt was submitted to His Worship, the Supreme Teacher the Mufti of the Egyptian Realm. The question was: "What is Your Worship's opinion regarding the following: A married man to whom one child was born is afraid that if several other children are born he would experience great hardship in rearing and providing for them, and that his health might suffer a nervous breakdown as a result of his exertions and worries. Or he may be afraid lest his wife's health might

[46]Arthur Jaffery, "The Family in Islam" in Ruth Nanda Anshen, *The Family: Its Function and Destiny* (New York, Harpers, 1949), p. 162.

deteriorate as a result of repeated and frequent childbirths, without sufficient interval for birth and recuperation. Now, should he or his wife, under such circumstance, be allowed to take certain measures, recommended by medical men, to avoid frequent childbearing so that a long interval may pass between one childbirth and the next, in order that the mother may be rested and the father spared of any undue hardship?"

After a careful and detailed examination, particularly in the light of the Hanafy School of Law, the Grand Mufti issued a *fatwa* dated the 12th *Dhi al Qaada* 1355 (25 January, 1937). It runs: "It is permissible for either husband or wife by mutual consent to take any measures . . . in order to prevent conception." (He refers to both natural and artificial methods.) He continues: "Later scholars of the Hanafy School consider that such consent is not even necessary if either husband or wife has an excuse as those mentioned or any similar ones." The problem of abortion was also included and the *fatwa* adds: "Opinion on this subject has differed but the majority are inclined not to allow it, except for a reason such as the interruption of the mother's milk, when she has another baby and the father cannot afford a 'wet nurse' and the baby's life is therefore endangered. After the quickening of the embryo abortion is absolutely prohibited."

"Such is Our answer as it appeared to Us; and Allah, may He be praised and exalted, knows best."[47]

[47]In Arabic in the *Journal of the Egyptian Medical Association* (Cairo), July, 1937. See also *News of Population and Birth Control* (New York), May, 1952.

CHAPTER 5

Birth Control—Technical Aspects

What is the Best Method?

BROADLY speaking, contraceptive measures may be divided into those that can be used by the husband and those that can be used by the wife. The male methods consist of measures which prevent the sperm from entering the female genital tract. One of these methods is *coitus interruptus*, generally referred to as withdrawal. This method is mentioned in the Old Testament (the story of Onan)[48] and even today it is probably the most widely used measure for the prevention of conception. This method is popular because it requires no apparatus or preparation, costs nothing and is always available.

While this method is apparently successful with many who are disciplined in this technique, there appears to be a considerable difference of opinion on its effects on the health of those who practise it for any prolonged time. The opinion of those who oppose this method is neatly summarized by Dr Hannah M. Stone, who points out: "The act of withdrawal itself and the constant tension and anxiety on the part of both mates lest it be delayed too long, interferes seriously with the normal physiological processes of the sexual relation and may give rise to organic or emotional disturbances. Furthermore, if withdrawal occurs too soon it may prevent the woman from experiencing an adequate response and thus affect her sexual reaction."[49] Some

[48]"There Judah saw the daughter of a certain Canaanite whose name was Shau; he married her and went in to her, and she conceived and bore a son, and he called his name Er. Again she conceived and bore a son and she called his name Onan. Yet again she bore a son and she called his name Shelah. And Judah took a wife for Er his first born, and her name was Tamar. But Er, Judah's first born, was wicked in the sight of the Lord; and the Lord slew him. Then Judah said to Onan, 'Go in to your brother's wife, and perform the duty of a brother-in-law to her, and raise up offspring for your brother.' But Onan knew that the offspring would not be his; so when he went in to his brother's wife he spilled the semen on the ground, lest he should give offspring to his brother. And what he did was displeasing to the sight of the Lord, and He slew him also." *Genesis*, xxxviii, 2-10.

[49]Hannah M. Stone, "Birth Control—A Practical Survey", *Health and Hygiene* (New York), April, 1937.

go to the extent of dismissing this method as being the easiest way to make husbands and wives nervous wrecks.

On the other hand, there are some medical experts who not only do not see any harm in this method but commend it as satisfactory. Some evidence to support this contention is not lacking.

An investigation carried out by the Council of the Royal College of Obstetricians and Gynaecologists on Family Limitation and its influence on human fertility during the fifty years prior to 1937, revealed that of "women married in 1910-19 a proportion (31 per cent) used non-appliance methods only (non-appliance methods are more or less synonymous with *coitus interruptus*), Taking that proportion for the 1910-19 marriages as standard, then for women married in 1920-24 there was a 29 per cent increase in the number who assented to having used birth control but who insisted they had relied entirely on non-appliance methods." While subsequent marriage groups showed a steady decline in the proportion of those using non-appliance methods, the question concerning the mean number of live births per woman (non-appliance and appliance users) brought out a surprising fact. "The fact which will surprise many people, was the *absence* of difference between the number of births to those who used appliance methods and to those who relied on non-appliance methods. In *no* marriage group, whether reproduction was complete or not, could any significant differences be found between the two types. This also held true when we examined each social class separately." [50]

There is yet another method akin to *coitus interruptus* which

[50] *Papers of the Royal Commission on Population, Volume* I (London, H.M.S. Office, 1949), p. 54 and p. 70. The Registrar General of India, commenting on this evidence points out, "Now it is impossible to believe that people would practise this method (*coitus interruptus*) in such large numbers over a long time if it was invariably calculated to make them nervous wrecks. There are, no doubt, circumstances in which harmful results would follow. But equally clearly there must be circumstances in which they would not; otherwise the facts found by the Commission could not exist. There is, at present, a complete absence of serious information on the subject. It is necessary that correct information should be collected on this point. *It is possible—to put it no higher—that a large proportion of people who are unable or unwilling to use appliance methods of contraception for one reason or other, might yet succeed in avoiding improvident maternity by the practice of 'conjugal temperance' until three children are born and 'coitus interruptus' thereafter.*" *Census of India*, 1951. *Vol.* 1, *India, Part* 1-*A. Report*, pp. 222-23.

has received rather less attention in modern birth-control literature, due, no doubt, to its apparent impracticability. This method called *Karezza* or *coitus reservatus* is defined by Dr Dickinson as "prolonged intercourse accompanied by maximum and varied excitement, with orgasm for the woman if desired, with no seminal emission or rare external emission—but with the substitution of a gradual subsidence of feeling for the man."[51] The mutual avoidance of orgasm is only employed when the couple wish to prevent conception. Dr Alice Stockham in her book *Karezza* points out: "The caresses lead up to connection, and the sexes unite quietly and closely. Once the necessary control has been acquired, the two beings are fused and reach sublime spiritual joy. This union can be accompanied by slow, controlled motions, so that voluptuous thrills do not overbalance the desire for soft sensation. *If there is no wish to procreate, the stormy violence of the orgasm will thus be avoided.*"[52]

Dr Havelock Ellis, however, is not completely in agreement with Dr Stockham's views. He observes: "The practice of prolonged or reserved coitus with or without ultimate orgasm, has now-a-days numerous advocates and a considerable body of practical adherents, not so many as interrupted coitus because it is less easy to carry out. It was the ordinary practice of the Oneida community, and was later advocated in Dr Alice Stockham's well-known book, *Karezza*. There can be no doubt that prolonged intercourse is highly agreeable to the woman partner, and without the slightest evil results; for she is left entirely free and is not precluded from experiencing the orgasm at its own good time. All women who have had experience of this method seem to approve of it. Some doubts, however, have been expressed as to its effects on the man who practises it. There is reason to think that in some cases, greatly prolonged coitus may produce some of the same nervous results, though usually in a milder degree, as interrupted coitus. But in a large proportion of cases this is certainly not the case. The practice is not usually easy except for men of sound and well balanced nervous systems, and such persons do not usually seem to be

[51]Robert L. Dickinson, *Techniques of Conception Control* (London, 1932), p. 62.
[52]Alice Stockham, *Karezza* (New York, Diehl, Landau and Petit, 1903).

conscious of any evil results from the practice provided, of course, that it is not carried to excess."[53]

This method of birth control was used for some years in a religious group, the Oneida community in upper New York state, with apparently complete success. The leader of the community and the originator of the method was a very remarkable and deeply religious man named Noyes. The method, surprisingly enough, was taught to the adolescents or young unmarried people by some of the well-poised, wise, older, married people; the older married women teaching the young unmarried men, and the older married men teaching the girls or young unmarried women. The teaching in the community was by actual sexual union. After that, there was the usual monogamous marriage. No promiscuity. They were, according to many accounts, a highly moral, sober and industrious group. They still exist and are economically flourishing though now without this feature. Rather naturally, this method, in the early 1800's, so horrified the people in the neighbouring areas that legislation was finally passed forbidding the community to practise this. It is obvious that if this method requires considerable understanding and self-control it also involves no expense. Perhaps this method can be successfully taught verbally to small groups in family planning clinics. This procedure, which appears to be unrealistic at the outset, may be worth a trial.

The other male method is the use of the *sheath*. Devised some four hundred years ago by an Italian Catholic physician, it has been extensively employed both for venereal prophylactic and for the prevention of conception. In general, it is a satisfactory, reliable and harmless method. But the sheaths may be of an inferior quality or defective. Sometimes the method may cause physical discomfort or interfere with the normal sexual responses.

Above all, these male methods—*coitus interruptus* and the *sheath*—present the general objection that they make the woman dependent upon the man for protection in a matter that affects her own health most vitally. Should the husband be indifferent or careless or in an irresponsible condition, the wife subjects herself to grave risks. This is one of the reasons why methods

[53]Havelock Ellis, *The Psychology of Sex* (New York, Emerson Book, 1946), pp. 289-90.

for the prevention of conception which can be used by the wife are generally considered to be the methods of choice today.

For conception to ensue, the sperms of the male, after they have been introduced into the vaginal canal during the sexual act, must enter into the uterus or womb and from there pass to the tubes, where they meet the egg-cell. It is in one of the tubes that the union of the sperm and egg takes place. Consequently, as long as the spermatozoa can be prevented from entering into the womb, conception will not occur, and it is upon this fact that the female methods of birth control are based. Both chemical and mechanical means are employed for this purpose. The chemical methods immobilize or destroy the spermatozoa within the vagina, while the mechanical appliances prevent the sperm cells from entering the womb and reaching the upper genital passages.

Chemical Methods

There are a number of different kinds of *chemical methods* of contraception. But the most commonly used is in the form of a jelly. The contraceptive jelly is introduced into the vaginal canal by means of a special nozzle or appliance before intercourse and it acts both as a chemical spermicide and as a mechanical barrier. But while this may be effective in preventing conception, it is not absolutely reliable. In fact, there is no chemical contraceptive which is completely reliable and effective.

Diaphragm and Jelly

The best method prescribed in British, American and European Birth Control Clinics today is the mechanical contraceptive called the *diaphragm* (pessary). This must be individually chosen for the woman, as the sizes differ. This device is made in many different sizes and types and the proper type and size can be determined only after an individual gynaecological examination by a qualified doctor. With a little instruction, a woman can be easily taught to use this device, which has proved to be a highly reliable and satisfactory method. Its use does not interfere with the marital relation or the sexual response; nor does it impair the fertility or childbearing ability of a woman. When a wife desires to have a child she can stop using the

diaphragm. After childbirth, the wife must return to her physician or clinic for re-examination and refitting. The diaphragm is best used with a vaginal jelly. This is the best available method in the state of our present knowledge and is endorsed by the highest medical authorities.

The Royal Commission on Population in their *Report* in endorsing these methods point out: "We agree with the view that there is nothing inherently wrong in the use of mechanical methods of contraception. Our survey of the history of family limitation leaves us in no doubt that, if these methods were not available, other methods would be used, and some of them, e.g. criminal abortion, the prevalence of which even now is distressingly high, are very undesirable. There is no prospect that men and women, having acquired control over the numbers of children they will have, will abandon it. Nor is it desirable that they should. The spread of contraceptive knowledge represents a big extension of man's control over his circumstances. As such it brings many problems with it. But it has been one of the conditions of the great social advances that have been made since the nineteenth century; it has made possible for increasing numbers of people the planning of the size of their families, and has helped to free women from excessive burdens and to ensure that more and more of the children are wanted children. Control by men and women over the numbers of their children is one of the first conditions of their own and the community's welfare, and in our view mechanical and chemical methods of contraception have to be accepted as part of the modern means, however imperfect, by which it can be exercised.

"We contemplate, therefore, that with the spread of effective knowledge of contraception, voluntary parenthood will become more or less universal. This will accelerate the fall in the numbers of the larger families except among those who deliberately decide to have them; but it will help to secure that children, whether in large or small families, are wanted children and are not the result of ignorance." [54]

But the difficulties of this method in Indian conditions can be readily seen. As the method involves an individual medical examination and instruction, requiring a competent doctor within

[54] *Royal Commission on Population: Report* (London, H.M.S. Office, 1949), p. 159.

the reach of rural and urban mothers, the cost involved in setting up the necessary clinics and providing them with doctors and equipment would be prodigious. Even after this initial expenditure, there is no guarantee that the needy mothers could afford the cost of the necessary equipment, even if the clinical consultation were free. Shocking as it may seem, in many rural areas the cost of having a baby would be cheaper than the price of the birth control equipment. Unless and until the Government is prepared not only to give free clinical advice but also to supply equipment free of cost this particular method cannot be acceptable to the average rural mother in India.

Sterilization

However, the cheapest and safest method of birth control today is that of sterilization. Of late, expert medical opinion has veered round in favour of this simple and minor operation. Both men and women can be sterilized. The operation on the mother—salpingectomy—is usually performed twenty-four to forty-eight hours after delivery and it usually does not prolong the period of hospitalization.

The operation on the husband—vasectomy—is quite simple. Its severity is no greater than a tooth extraction. It simply involves the resection of the *vas deferens*. It does not affect the sex impulse; nor does it interfere with sexual pleasure. There is unfortunately a superstition in our country that it has an un-sexing effect on the male. This, of course, is not true. The effect of the operation is to prevent the microscopic spermatozoa from leaving the body. They come into existence as before and so do the male hormones but they are absorbed by the blood stream as impurities and discarded like any other waste. Sterilization does not diminish the quantity of the seminal fluid in which they swim but it becomes free of spermatozoa. Any competent surgeon can perform this simple operation.

Any father of two or three children (or for that matter any man) can undergo this operation. Should a father, of course, lose all his children he cannot have any more. But the fact that he has decided to have no more than two or three children assures them greater chances of survival. They will receive better care

and a better share of everything needed for their welfare. There is also a second difficulty. Should a man lose his wife and remarry, the second wife could not become a mother. But, here again, the chances of a man losing his wife will be considerably less in our country as the operation implies that she will not be subjected to frequent and ill-spaced pregnancies resulting as they do sometimes in premature deaths.

It is obvious that this operation should be undergone voluntarily only by those husbands and fathers who want a technique of *permanent* conception control. As a family planning measure, there should be no compulsion of sterilization even on parents who may breed to improvident limits. In fact, even those husbands who voluntarily wish to undergo this operation must be enlightened on its implications by their surgeons, for it is usually impossible to undo the operation.

Salpingectomy in a woman is a relatively major operation compared to the simple vasectomy operation on the male. The operation consists of severing the Fallopian tubes which lead from the ovaries to the uterus. Because it involves opening the abdomen in order to reach the Fallopian tubes, salpingectomy may require hospitalization for some days; whereas for a vasectomy operation no hospitalization is required.

But in cases of epilepsy, insanity, leprosy or mental defectiveness, the state might explore the possibility of compulsory sterilization as a eugenic measure. This would prevent the transmission of undesirable genes and the quality of the population could thus eventually be raised. Several countries in the west, particularly in the United States of America (notably the states of California and North Carolina) have successfully adopted this measure and there is no reason why its possibilities cannot be explored in India. A careful and scientific examination of this problem in the light of conditions in our country is needed.

A Biological Contraceptive

Thus, until now, contraceptives have been mainly either mechanical or chemical, aiming to prevent the spermatozoa from entering the cervix. Today, however, research is being directed along lines that may yield a biological contraceptive. The contra-

ceptive of the future will be based not on the prevention of spermatozoa entering the uterus but on the prevention of either ovulation, spermatogenesis, fertilization or the implantation of the fertilized egg. Current research along these lines is promising.

One possibility which has been under investigation for some time is the prevention of either fertilization or nidation by the production of immune bodies in the female by the use of certain antigens. Langer's work on female mice, in this direction, appears to be promising.[55]

Secondly, there is the possibility of inducing temporary sterility in the female through hormonal control. Animal experiments seem to indicate that fertility control is possible through the use of progesterone and related steroids. But "practically all of the investigations on hormonal sterilization have thus far been carried on with animals, and their value and practicability for human application still remains to be determined. The reproductive mechanism is a very delicate apparatus, and obviously extreme care and caution are to be exercised if biological products are to be utilized for fertility control. Nevertheless, with the growth of the understanding of endocrine physiology and the improvement in the manufacture of potent, stable and pure glandular products, it is quite likely that we shall be able in the not far distant future to render a woman, or man for that matter, infertile for a definite length of time by the occasional hypodermic injection of a hormone or even, by the administration of a few compressed tablets."[56]

Thirdly, some research on certain plant materials used by certain primitive peoples in various parts of the world to control fertility is being carried on. For instance, it has been known for some time that the American Indians used a plant (*Lithospermum*) for controlling fertility. Though it is not known how effective it is and how exactly it works, infusions made from this plant appear to be effective in controlling fertility in both sexes of

[55]Alexander Langer and J. Garcia-Mendez, *Archives of Cuban Cancerology*, Vol. 8 (1949), pp. 332-340.

[56]Abraham Stone, "Current Research in Contraception in the United States", *Proceedings of the Fourth International Conference on Planned Parenthood, Stockholm*, 1953 (London, 1954), p. 61, also, Stone, "Research in Contraception—A Review and Preview", *Proceedings of the Third International Conference on Planned Parenthood* (Bombay, 1952), p. 101.

certain animals. When the fertility-controlling ingredient of this plant is isolated and studied and more is known of its possible reaction on the human reproductive behaviour we may know of its practical possibilities as a birth control drug.[57]

The discovery and perfection of a biological contraceptive is therefore to be welcomed. But the oral pill that is available today in the United States is still under medical investigation. It has to be taken for twenty days of the menstrual cycle. Secondly, the pill is very expensive. It is not realistic to expect mothers in India and other underdeveloped countries to be able to afford these pills even if they were available, or to have the necessary discipline to take them regularly. Therefore, what is needed is more research to evolve a cheap pill which need be taken only once or twice for the desired conception control.

Once such a cheap contraceptive, which is harmless and reliable, is made available, the unwanted baby may become as rare as a case of Cholera in Denmark.

[57]Benjamin F. Sieve, "A New Anti-fertility Factor", *Science* (Washington, D.C.), Oct. 10, 1952.

N. W. Pirie, "The Biochemistry of Conception Control", *Eugenics Review* (London), 43, 139 (1952) and *Lancet*, No. 1, A. 54 (1952),

Henry de Laszlo and Paul S. Henshaw, "Plant Materials used by Primitive People to Affect Fertility", *Science* (Washington, D.C.), May 7, 1954, Vol. 119, pp. 626-631.

Paul S. Henshaw, "Physiologic Control of Fertility", *Science* (Washington, D.C.), May 14, 1953, Vol. 117, pp. 572-582.

Dr S. N. Sanyal of the Calcutta Bacteriological Institute has elaborated a new means of contraception which consists in the administration of the oil from the pulse "mantar" (*pisum sativum linn*). Dr Sanyal recently said that the oil had an anti-Vitamin E. action and its effect could be quickly nullified by administering this vitamin. In animals the results had been conclusive, and in women the results appear to be promising. Clinically the oil is administered by injection. Further research and experimentation on this promising line of approach is being carried on. S. N. Sanyal, "Population Problem of India", *Journal of Indian Medical Association* (Calcutta), March, 1951.

CHAPTER 6

Administrative and Human Problems

Aids and Difficulties

TODAY, the question is not whether we shall have birth control or not, for it is necessary and inescapable in any democratic and positive population policy; but the question is how to disseminate the necessary information and promote the practice in an underdeveloped economy with all its well known limitations.

There are several factors, both favourable and unfavourable, to the inclusion of birth control in any national health or economic programme in India. The foremost aid is the fact that the Government has never objected to the dissemination of birth control information or to the establishment of clinics. This was true under the British raj and it is true today. Indeed, the Government of India is more progressive in its outlook on this question than the government of any other country, with the exception of Japan, confronted with a comparable socio-economic situation. In most countries, including the United Kingdom and the United States, there have been severe battles, legal, social and moral, before birth control practices could be made acceptable and made available to those who needed them. India is fortunate in being able to enjoy the benefits of battles fought elsewhere years ago. The birth control crusader in India today has no legal or political battles to win. The Prime Minister, Pandit Jawaharlal Nehru and the Government of India have come out in favour of family planning; so has the Government Planning Commission. What is perhaps even more important is that the birth control movement in India is less hampered by misplaced prudery on the part of the people than in some countries which claim to be more civilized and advanced.[58]

[58]Havelock Ellis writes that in India "sexual life has been sanctified and divinised to a greater extent than in any other part of the world. It seems never to have entered into the heads of the Hindu legislators that anything natural could be offensively

Now that the Government and the Planning Commission have declared themselves in favour of planned parenthood, the next most important single factor will be the attitudes of Indian mothers (of all religious beliefs and denominations), since, after all, they are the persons most intimately involved. Although India lacks organizations like the Gallup Poll in the United States and Mass Observation and the Institute of Public Opinion in the United Kingdom, some evidence on this question is available.

In Baroda, a provincial city in Gujarat state, with a 1951 population of 211,416, the present writer conducted an attitude survey in 1952 based on a 5 per cent random stratified sample. The schedule was addressed to Gujarati and Marathi and other mothers between the ages of 15 and 45, married, living with their husbands, and mothers of at least one child. Sixty-three per cent of the Gujarati and 77 per cent of the Marathi respondents favoured birth control; 18 per cent of the Gujarati and 5 per cent of the Marathi mothers preferred "moral restraint"; 19 per cent of the Gujarati and 18 per cent of the Marathi mothers opposed "any kind of control of family size".[59]

Similarly, a study conducted in Ramanagaram village in Mysore state showed that "in 78 per cent of the couples interviewed one or both partners expressed a desire to avoid or postpone pregnancy and to learn a method for doing so". Again, in the Lodi Colony (in New Delhi) which houses junior civil servants, 72 per cent of the wives interviewed expressed a desire to learn a method for postponing or avoiding pregnancy. The Family Planning pilot research project conducted in the villages of Lucknow, Meerut, Etawah, and Almora districts in Uttar Pradesh state (former United Provinces) revealed that 62 per cent of the mothers and 57 per cent of the fathers in these rural areas approved of birth control and were eager to learn methods of family planning.

Another survey of attitudes towards family planning in Poona

obscene, a singularity which pervades all their writings, but is no proof of the depravity of their morals. Love in India, both as regards theory and practice, possesses an importance which it is impossible for us even to conceive." *Studies in the Psychology of Sex* (London, 1936), Vol. VI, p. 129.

[59]S. Chandrasekhar, "Attitudes of Baroda Mothers toward Family Planning", *Report on the Proceedings of the Third International Conference on Planned Parenthood* (Bombay, 1952), p. 71.

showed that out of 1,705 males and 751 females (in a sub-sample of city and non-city areas) who responded to questions on contraception, 64.8 per cent of the males and 53.2 per cent of the females (all were married but unfortunately the sample included 132 widowers) said that they would welcome information on family planning.[60]

A recent random sample survey of attitudes of married couples towards Family Planning with special reference to sterilization carried out in the City of Madras by the present writer, revealed that 75 per cent of the husbands and 73 per cent of the wives were for Family Planning. With increasing age, an increasing percentage of husbands and wives were for Family Planning.

As for sterilization, vasectomy was more popular than salpingectomy. Nearly 24 per cent of the husbands with a knowledge of vasectomy were for the operation. Nearly 15 per cent of the wives with a knowledge of salpingectomy were for the operation. If only those couples of whom at least one member had some knowledge of the surgical method were considered, it was found that about 26 per cent of the couples were for the operation.[61]

Why, then, are there no birth control clinics spread all over India's villages, towns and cities? The reason is that if the above mentioned aids are impressive, the obstacles confronting a birth control programme are no less so. First, the low level of living is both an asset and a liability—an "asset" because it underscores so vividly the need for birth control, and a liability because it makes the practice of such measures difficult. The practice of birth control is usually associated with a high level of living. That is, once the people come to enjoy a high standard of living, they become reluctant to give it up and are therefore compelled to voluntarily restrict the size of the family to escape the inevitable logic of reduced rations. But since India cannot wait to introduce birth control until the level of living has been raised, it has to form an integral part of any scheme of national development; it is indisputable that rapid population growth and a rising

[60]Dandekar, V. M. and Kumidini, *Survey of Fertility and Mortality in Poona District* (Poona, Gokhale Institute, 1953), pp. 142 and 172.

[61]S. Chandrasekhar, *Report on a Survey of Attitudes of Married Couples Toward Family Planning in the Pudupakkam area of the City of Madras*, 1958 (Madras. Government of Madras, 1959).

standard of living cannot go together in the present Indian economic context. Thus, the dilemma before India is that, whereas birth control is needed to check the threatened decline in the already poor living standard of her people, the successful practice of birth control methods requires a far higher general living standard than is the case in India today. The obvious way out of this difficulty is to have birth control form a concomitant part of all development programmes. Secondly, this movement should start in the villages which constitute the base of India's socio-economic structure: in reality, however, it has begun at the apex—in cities. The fact that birth control facilities exist in most large cities catering to the needs of the middle and upper classes represents rather more of a problem than a solution, for it tends to aggravate rural-urban and inter-class fertility differentials. This situation in the long run is bound to affect the quality of the population, for the families that are now most severely handicapped in terms of economic resources, health and education, are precisely those that are most poorly equipped to rear the nation's future citizens. Yet, it is these very families which have at present the major burden of nurturing more than their share of the next generation.

But taking birth control to the villages is unfortunately more easily said than done. Not only are the villages deficient in basic health and medical facilities, but they are plagued by unhygienic conditions, insufficient running water (and often any readily available water), lack of privacy, illiteracy, ignorance and above all poverty, which is at once the cause and consequence of this sad state of affairs. The large general hospitals and specialized clinics are located in big urban centres where only a minority of the population lives. Since the rural mother cannot afford to come to the city clinic, the contraceptive services must be taken to the village. A modest and inexpensive birth control clinic for ten or twenty villages would be the ideal; or at least a peripatetic contraceptive medical unit could visit a village once a month.

Thirdly, there is the inevitable question of finance. Many a desirable scheme for economic and social reconstruction of the country has foundered on the rock of financial stringency. An average Indian family, particularly in the rural areas, cannot

afford the cost of a clinical consultation or the services of a gynaecologist or even the price of an imported contraceptive—say a diaphragm and a tube of jelly. The Government have already explored the possibility of distributing free contraceptives to necessitous mothers through maternity hospitals and Red Cross centres, and have begun to do so on a limited scale. While the financial implication of this may be staggering, it deserves implementation by both the Central and State Governments. An investment in a national contraceptive service can easily result in a cut in the total national medical and other bills.

Fourthly, the illiteracy and ignorance of our women is a formidable obstacle. We cannot entrust mothers with a contraceptive and some printed instructions. Our mothers, like conservative and illiterate mothers in other parts of the world, are notoriously ignorant of the structure and function of their reproductive systems. Hence, a modicum of sex education appears to be in order both in the girls' high schools and women's colleges, and still more to our uneducated adult women. Without a clinical demonstration and without absolute cleanliness and without proper knowledge, birth control may do more harm than good. Finally, there are certain other minor difficulties inherent in our way of life and low living standards. There are the problems of cleanliness and tidiness, bathrooms and privacy, lights and running water. Only those who are familiar with our blighted countryside can appreciate these difficulties. But no matter what the obstacles, this reform must be pioneered by both governmental and voluntary agencies.

What Birth Control can do for India?

What place has birth control in India's health, economic and social planning? The primary objective of birth control as a health measure in India will not be so much to reduce the birth-rate as to reduce the high death-rate, paradoxical as this may seem. India, as pointed out earlier, has a high birth-rate and a high death-rate yielding a low survival rate. Birth control will reduce the death-rate not only because it will reduce the unwanted births but also because it will prevent the birth of babies who have no reasonable chances of survival. It will thus cut down

India's terrific infant mortality rate. A fall in the birth-rate must in the circumstances of our country lead to a fall in the death-rate since infant deaths make a heavy contribution to total mortality. As frequent and ill-spaced child-bearing is largely responsible for India's high maternal mortality, the spacing of children and the reduction of the family size will also contribute toward a reduction of maternal mortality. And by reducing the birth-rate and eventually stabilizing the population at some manageable number, it will cut down the general death-rate.

Indian rural mothers, by and large, get little out of life. Great changes are going on in the country but they have not yet brought in their wake either plenty or progress in the personal lives of these women. Their minds, normally placid and content, are beginning to be plagued by grave doubts and serious misgivings. Their bodies, once inert and uncomplaining, now yearn for the minimum decencies of daily life. But there seems to be nothing to cheer their minds or nourish their bodies. At the one end is incredible poverty and at the other, a trail of miserable children who aggravate that poverty. The average village woman seems to oscillate between gestation and lactation until a premature end winds up the sorry tale.

According to official statistics, as pointed out already, about 200,000 mothers die annually from causes connected with child-birth. This appalling maternal mortality is matched only by an equally shocking infant mortality. A hundred out of every thousand young wives are doomed to death in giving birth to children. And about 115 infants out of every 1,000 live births die before they reach their birthday. It is impossible to estimate the gravity of this loss in any understandable human terms. What a tremendous waste of human energy! What an emotional drain on young husbands and children who lose their wives and mothers, and young parents who lose their babies! We must put an end to the sad statistical probability in our country that "in many cases children die because many are born, and many are born because comparatively few survive". The premature deaths of thousands of these mothers and children represent not only a social and economic problem of fundamental national importance but, on humanitarian grounds alone, a problem that

cries for solution because they need not have died when they did. Their tiny "graves" seem to echo the wish of Euripides: "Not to be born is the best and to die as soon as possible is the next best."

Cannot this plight be averted in our country? Can birth control, among other measures, provide an answer? One might ask what exactly birth control has achieved elsewhere. In Europe and America birth control has come to stay for several reasons, such as the desire to provide the best for the children within a limited family budget, to safeguard the health of the mother,[62] the desire for social advancement, the eagerness to enjoy life and leisure without the burden of too many children and, finally, limiting the number of a family for its own sake. In the west, birth control has become a means of assuring healthier mothers and children, of reducing destitution and dependency, of improving the race by eugenic control, of preventing population pressure and thereby preventing one of the causes of war; and above all else it has become the best means of guaranteeing a fundamental human right—the right of a woman to decide how many children she will bear and when she will bear them. Having babies by choice and not by chance, by design and not by accident, is increasingly becoming an integral part of western cultural mores. Birth control can do all this for India.

Government and Birth Control

Fortunately, the question of birth control has not been ignored by the Government of India, either by the British in the past or by the Indians today. This does not mean that there have not been peculiar inhibitions on the part of both the rulers and the ruled.[63] While thoughtful men and women—Indian and

[62]Dr Karl Menninger writes: "There are certainly some women who are well enough to have sexual intercourse but not well enough to bear children, and it would seem to be that the health of such women should be safeguarded without forcing them to be continent and without forcing their husbands to choose between continence and adultery." *Love Against Hate* (New York, Harcourt Brace, 1942), p. 86.

[63]"The truth is that the inhibitions connected with the study of the population problem have been chiefly on our side. We have been accustomed to plan our own lives in such a way as to secure a comfortable existence, but we have assumed quite wrongly that education in life planning is inadmissible in India."—Sir John Megaw, "Population and Health in India", *Review of India* (1930), p. 21.

British—have pleaded for birth control before and continued to do so after India's political freedom, there have been many in both camps who were (and to some extent are) opposed to family planning. Till the early 'twenties, the British measured the prosperity of their rule, to some extent, by the magnitude of the net addition to India's population. The degree of satisfaction over and the justification of the British rule in India was directly in proportion to the substantial increase in the population that the census revealed every decade.

A little incident which happened some eighty-five years ago in India is a good illustration of the attitude of the many educated British and particularly the Government authorities to this question. Sir Richard Temple, Governor of Bombay (1877-79), when on tour, was presented with an address by the Karbari of a Mahratta State, who requested His Excellency "to use his high character and transcendent ability to restrain, in some measure at all events, the inordinate aptitude of the people to increase the population". Sir Richard's indignant reply was that "he would do everything in his power for the increase, and nothing for the diminution of Her Majesty's subjects".[64] The Karbari and his friends were amazed that the Governor should have taken offence at so reasonable a request.

On the other hand, the inhibitions on the part of the ruled Indians was equally depressing. Not the least of the difficulties imposed by alien rule is the barrier it sets up to the understanding of the basic issues of a nation's life. All hardships and tensions are ascribed to foreign rule. Indian poverty was the result of British exploitation and not due even in a small measure to the pressure of population on the *available* resources of the country.

This pardonable, if unscientific, attitude was responsible for ignoring the population problem and the obvious solution of

[64]Queen Victoria herself (unknown to her pro-natalist Governor in distant Bombay) wrote in a letter to the King of the Belgians in 1841: "I think, dearest Uncle, you cannot *really* wish me to be the *maman d'une nombreuse famille*, for I think you will see with me the great inconvenience a *large family* would be to us all, and particularly to myself; men never think, at least seldom think, what a hard task it is for us women to go through this very often." This from a British Queen who had at least no economic problems to worry about. A. C. Benson and Viscount Esher. *The Letters of Queen Victoria: A Selection from Her Majesty's Correspondence between the years* 1837 *and* 1861 (London, 1907), Vol. 1, p. 318.

family planning. Thus straight thinking on this question was inhibited on both sides.[65]

However, the question could not be ignored for long. The Indian National Congress set up before the Second World War (1935) a National Planning Committee under the chairmanship of Jawaharlal Nehru. One of the Committee's resolutions recommended, "In the interests of social economy, family happiness and national planning, family planning and a limitation of children are essential and the State should adopt a policy to encourage these. It is desirable to lay stress as well as to spread knowledge on cheap and safe methods of birth control. Birth control clinics should be established and other necessary measures taken on this behalf and to prevent the use of advertisement of harmful methods."[66] The resolution is significant but goes on to add: "A eugenic programme should include the sterilization of persons suffering from transmissible diseases of a serious nature such as insanity or epilepsy." This resolution was adopted by the National Planning Committee of the Indian National Congress when India was not free and the Committee had not the force of governmental authority.

In the meanwhile, the Government of India set up an authoritative Health Survey and Development Committee which observed in their Report (1946), "All of us are agreed that when child-bearing is likely to result in injury to the mother or infant, there is every justification for the practice of contraception. In such cases, it should be the responsibility of the Government to provide instruction regarding contraception in Maternity and Child Welfare Centres, dispensaries, hospitals and any other

[65]Jawaharlal Nehru wrote some twenty years ago, "If India is poor, that is the fault of her social customs, her *banias* and moneylenders, and above all her enormous population. The greatest *bania* of all, the British Government of India, is conveniently ignored. And what they propose to do about this population I do not know, for in spite of a great deal of help received from famines, epidemics, and a high death-rate generally, the population is still overwhelming. Birth-Control is proposed and I, for one, am entirely in favour of the spread of the knowledge and methods of birth-control. But the use of these methods itself requires a much higher standard of living for the masses, some measure of general education, and innumerable clinics all over the country. Under present conditions birth-control methods are completely out of reach for the masses. The middle classes can profit by them as, I believe, they are doing to a growing extent."—*An Autobiography* (London, Bodley Head, 1936), p. 444.

[66]*Population* (Bombay, National Planning Committee, 1937), p. 6.

public institutions which administer medical aid to women. We also consider that the supply of contraceptive requisites should be made free of cost to necessitous women when the practice is advocated for reasons of health. There is also unanimity among us in respect of State action in two other directions, namely, (1) control over the manufacture and sale of contraceptives, as in the case of food and drugs, and (2) assistance from public funds towards research for the production of a safe and effective contraception."[67]

While this recommendation from an official level was welcome enough, the most important need in India is to provide contraceptive advice on *economic* grounds also. Even this authoratative committee could not shake off traditional official obscurantism and include poverty and low living standards as pressing reasons for adopting contraception and thus limiting the size of the family. The Report and its recommendations, however, were shelved in the excitement of the transfer of political power.

India became free in 1947 and happily the question was not forgotten. The national Indian Government set up in 1950 the Planning Commission under the Chairmanship of Prime Minister Jawaharlal Nehru. The Planning Commission brought out the *Draft Outline of the First Five-year Plan* in 1951 and the final Report of the Plan in 1952. They take a courageous stand on the imperative need for family planning in India.

The First Five-year Plan (1951-56)

The first Five-year Plan fortunately does not debate what is no longer an academic question—whether India is overpopulated or not. After examining the nature and significance of India's population pressure and its bearing on national development, they point out: "While it may be difficult to say what the optimum level of population for India should be . . . it is clear that under present conditions, an increase in manpower resources does not strengthen the economy but, in fact, weakens it . . . It is necessary in the present context only to stress the fact that

[67] *Report of the Health Survey and Development Committee* (New Delhi, 1946), Vol. II, p. 487.

unless measures are initiated at this stage to bring down the birth-rate and thereby reduce the rate of population growth, a continuously increasing amount of effort on the part of the community will be used up only in maintaining existing standards of consumption . . . Increasing pressure of population on natural resources (which must inevitably be limited) retards economic progress and limits seriously the rate of extension of Social Services so essential to civilized existence."[68]

They acknowledge that "a rapidly growing population is apt to become more a source of embarrassment than of help to a programme for raising standards of living. In other words, the higher the rate of increase of population, the larger are likely to be the efforts to raise *per capita* living standards."[69]

The Planning Commission, on the assumption that the Indian population was likely to grow in the ten years from 1951 at the rate of about 1¼ per cent per annum—the rate registered in the last decade—estimated that at the end of the First Five-year Plan (1956) the population was likely to be 378 million. If the assumptions of this projection had lasted for a longer period, India's population in 1971 was likely to be 450 million. On the same assumptions, twenty-five years from this time (1951), the population was likely to be 500 million. This rate of growth was viewed with disapproval, if not alarm, by the Planning Commission, for "the reduction in the rate of growth of the population must be regarded as a major desideratum".[70] To achieve this end, the Five-year Plan recommended certain measures for the inculcation of the need and technique of family planning. The Commission believed that progress in the field of family planning depends first on creating a sufficiently strong motivation in favour of birth control and, second, on providing acceptable, harmless, cheap and efficient methods. Two necessary requisites for the implementation of this policy, according to the Commission, were: intensive studies about the attitudes and motivations affecting family size and techniques and procedures for the education of the public on family planning as well as medical and technical research.

[68] *The First Five Year Plan—A Draft Outline* (New Delhi, Planning Commission, 1951), p. 16.

[69] *The First Five Year Plan* (New Delhi, Planning Commission, 1953), p. 18.

[70] *Ibid*, p. 23.

According to the Commission, a programme of family planning and population control should: (*a*) obtain an accurate picture of the factors contributing to the rapid population increase in India; (*b*) discover suitable techniques of family planning and devise methods by which knowledge of these can be widely disseminated; and (*c*) make advice on family planning an integral part of the service of Government hospitals and public health agencies.

The overall programme of population control as envisaged by the Planning Commission was fairly comprehensive and included:

(1) The provision in Government hospitals and health centres of advice on methods of family planning for married persons who require such advice. Medical officers working at hospitals and health centres like maternity and child welfare clinics should give advice to women regarding family planning when such advice is necessary for health reasons. If a doctor feels that a woman patient cannot undergo again the strain of pregnancy it is obviously the duty of the doctor to give such advice as is necessary to enable the person to prevent conception. In these circumstances, the doctor would be justified in suggesting any chemical, mechanical or biological methods of contraception or sterilization as may be indicated for the individual case. The giving of advice on birth control has been a procedure followed by the Ministry of Health in the United Kingdom in medical centres maintained by local authorities.

(2) Field experiments on different methods of family planning for the purpose of determining their suitability, acceptability and effectiveness in different sections of the population. If it can be demonstrated that our people, particularly those living in rural areas, can be educated to accept the rhythm method and use it as a practical method of limiting family growth, governmental support should be extended to the propagation of this method. From the point of view of avoiding an enormous expenditure as well as that of securing the ethical values that community life would gain by the self-imposed restraint which the rhythm method involves it would seem desirable to try out this method fully and thus ascertain its practicability. Whether the method is capable of wide applica-

tion in the community with adequate results or not, actual experimentation alone can tell. Research and experiments need not, however, be confined to a single method. There are numerous voluntary agencies which are currently propagating the spread of information on family planning and the use of chemical and mechanical contraceptives. Their activities would need support.

(3) Development of suitable procedures to educate the people on family planning methods. Inexpensive means of rapidly educating the public in matters relating to family size will have to be evolved if large-scale reduction in the national birth rate is to be obtained. Scientific techniques are available to assess the effect of mass educational campaigns. These techniques should be used to develop educational programmes suitable for the different economic and social sections of the population.

(4) Collection from representative sections of the population of information on reproductive patterns, and on attitudes and motivations affecting the size of the family. The reproductive pattern in any population is largely determined by social and cultural factors which may differ from one area to another. A thorough investigation of the differences in attitudes and motivations towards family size and of the factors responsible for producing such differences is important. Research along these lines is necessary if we are to understand the particular sentiments and aspirations to which programmes of family limitation in various sections of the population should appeal.

(5) Study of the inter-relationships between economic, social, and population changes: The information obtained by such studies will form the necessary background for the formulation of a national population policy and the development of appropriate measures for population planning based on factual information.

(6) Collecting and studying information about different methods of family planning (based on scientifically tested experience in India and abroad) and making such information available to professional workers.

(7) Research into the physiological and medical aspects of human fertility and its control.[71]

And for carrying out this programme of family planning, the Government of India allocated a sum of Rs. 65 lakhs (£485,500) to be spent by the concerned Ministries during the period of the First Five-year Plan.[72]

A careful perusal of the above recommendations of the Planning Commission will convince us that they were progressive and scientific and were not hampered by any preconceived notion or prejudice. The entire field of family planning in a broad sense was new in India and many of these recommendations were therefore of a pioneering nature.

Thus, as far as Family Planning is concerned, the First Five year Plan cleared the air by conceding that the country had a population problem and that Family Planning was an acceptable solution to it. The fact that the Planning Commission, a Government body, came out in favour of Family Planning, was in itself an important landmark in the campaign to promote Family Planning. While many of the suggestions and recommendations of the First Five Year Plan were shelved for various reasons, important experiments in the rhythm method were carried out during the Plan period. These experiments were useful in the sense that they demonstrated the ineffectiveness of the rhythm method, which therefore could be put aside as a serious method of Family Planning for the nation. On the whole, the Planning Commission's recommendations played a useful role in laying the foundation for the subsequent development of Family Planning services as an integral part of the nation's health services.

The Second Five Year Plan (1956-61)

The draft outline of the Second Five Year Plan again referred to the population problem and briefly examined its role in the development of maternal and child health services. They observed:

[71] *The First Five Year Plan, op. cit.*, pp. 522-24.

[72] The Planning Commission has appointed two committees relating to (*a*) policy and approach, and (*b*) research and programmes. It is proposed to appoint at a later stage a Population Commission to "assess the population problems, consider different views held on the subject of population control, appraise the results of experimental studies and recommend measures in the field of family planning to be adopted by the Government and the people." *The First Five Year Plan, op. cit.*, p. 524.

"The programme of family planning which was started during the First Plan will be continued on a substantially increased scale. The programme includes:—

(1) grants to State Governments, local authorities and voluntary organizations for opening family planning clinics,
(2) training of personnel,
(3) public education on family planning and population problems,
(4) research in human fertility and in the means of regulating it, and
(5) demographic research, including the study of inter-relationships between social, economic and population changes, reproductive patterns and attitudes and motivations affecting the size of the family and suitable procedures for the rapid education of the people."[73]

To implement the above recommendations, the Government set apart Rs. 40,000,000 for the Second Plan period. It was expected that about 300 urban and 2,000 rural clinics would be set up during the period to carry forward the Family Planning programme.

It must be said to the nation's credit that most of these programmes were carried out, though the number of clinics set up fell below the Plan's targets. The various state governments took up the task of promoting Family Planning seriously and provided adequate and correct information on both Family Planning itself and the need for it.

The Third Five Year Plan (1961-66)

By 1960 the country had become increasingly aware of the crucial role of population growth in the nation's plans for economic development and the need to make Family Planning a national habit. And the Draft Outline of the Third Five Year Plan (published in 1960) referred to the problem even more emphatically. They point out: "In an economy with low levels of income and consumption, high rates of population growth severely limit the pace of economic development. They increase the require-

[73] *The Second Five Year Plan. A Draft Outline* (New Delhi. Planning Commission. Government of India. 1956). p. 156.

ments of consumption and the difficulty of finding productive employment for the growing labour force. If the long term aims concerning per capita income and the reduction in the proportion of population dependent on agriculture are to be realized, the effort by way of capital accumulation has to be substantially increased. The projections regarding birth rate trends set out above certainly assume widespread changes in attitudes and a high degree of success in the spread of family planning practices. The objective of stabilizing the population has certainly to be regarded as an essential element in a strategy of development."[74]

The Draft Outline of the Third Plan emphasises that Family Planning is really a key programme for the Third and Fourth Five Year Plans. The programme has been steadily expanding as pointed out already, and it is expected that by 1961 India will have 676 urban and 1,121 rural Family Planning centres (the targets for the number of rural clinics were not achieved during the Second Plan). Some Rs. 25,000,000 have been provisionally allotted for Family Planning during the Third Year period. (The allotment under the Second Five Year Plan was cut down as a part of the pruning of the expenditure for the Second Plan). During the Third Five Year Plan period the number of Family Planning clinics will be increased from 1,800 to 2,000.

As outlined in the Plan, it is proposed to extend the present programme with the major emphasis on the following aspects: "(1) Widespread education to create the necessary social background for a large family planning programme. (2) Integration of Family Planning activities with the normal health services. (3) Provision of Family Planning services, including facilities for sterilization, through medical and health centres and facilities for distribution of contraceptives. (4) Development of training programmes in medical colleges and other teaching institutions, and (5) Utilization in the Family Planning campaign of local voluntary leadership to the largest extent possible."[75]

All this constitutes a laudable effort in the right direction. But the core of the problem is the *time* factor. At the present pace and with the existing motivations and methods of Family Planning,

[74] *The Third Five Year Plan. A Draft Outline* (New Delhi. Planning Commission. Government of India, 1960). p. 117.

[75] *The Third Five Year Plan. A Draft Outline. op. cit.*

it may take twenty to thirty years before the much needed decline in the birth rate is realized. Can we afford to wait?

The reason why we have not achieved definite results so far, and why the reduction in the birth rate has not been commensurate with the nation's efforts, lies in the particular methods we have been advocating. While it is fortunately true that there is no specific injunction against Family Planning in the Hindu religion as there is in the Catholic Church, it is still a somewhat alien and exotic plant and runs counter to our indigenous cultural mores. This does not, however, mean that Indian couples are opposed to Family Planning. On the contrary, as already pointed out, sample surveys of attitudes among different economic strata of the population and in various parts of the country reveal an overwhelming desire on the part of both urban and rural couples to limit their family size. However, all the objections to Family Planning are directed towards the methods generally made available, which are understandable. The present Western methods of Family Planning imply a higher level of living. But, to repeat, we need Family Planning because of our low levels of living. What is needed, therefore, is a method which is simple and good for *numerous exposures*—that is, sterilization or a method of permanent conception control.

It is true that there is in India as elsewhere, some prejudice and superstition concerning both vasectomy and salpingectomy. The common people consider *any* operation, in the sense of surgical interference, as dangerous in itself, and some fathers look upon vasectomy as a form of castration. To overcome these fears the Central and State governments may well entrust propaganda on this subject to those who have undergone vasectomy so that they can assure fathers contemplating it that it will not rob them of their sex impulse or pleasure. What is more, the governments may well grant, under certain conditions, a nominal bonus of say fifty rupees to those fathers who undergo this operation. No matter what the total amount involved, it will be cheaper to the nation in the long run.

CHAPTER 7

Cultural[76] Barriers to Family Planning

THE dilemma, as referred to earlier, before India and other similar semi-developed countries in Asia and Africa, whose population continues to grow at an annual rate of between 1.3 and 2.6 per cent is that whereas fertility control is needed to check the threatened decline in the already low living standards of their people, the successful and widespread practice of family planning requires and presupposes a far higher level of living than is the situation in these countries.

In other words, it is the poor and under-privileged with large families who desperately need assistance in family planning, but who are denied access to it because of poverty and ignorance and cultural inhibitions. They are the least equipped for the rearing of the nation's future citizens; and yet, often, it is these poor families who contribute more than their proportion of the next generation. Thus the under-privileged, who are a majority in all these underdeveloped areas, tend to become greater majorities through progressive differential birthrates. And the children are usually even more handicapped than the parents.

Sooner or later, these countries will have to face the social, economic, cultural and even political implications of this dilemma, and some effective way has to be found to cut through this vicious circle. And as the cultural setting of any community is to some extent both the cause and consequence of its poverty,

[76]The term "culture" is used in two senses: The sense in which it is normally used in Anthropology and Sociology meaning habits, customs, belief systems, and artifacts. Or, in the words of Tylor's now classic definition, "culture is that complex whole which includes knowledge, belief, art, morals, law, custom, and any other capabilities and habits acquired by man as a member of society," for man is the only culture-using animal species in the world. E. B. Tylor, *Primitive Cultures* (London. Murray, 1891). Vol. I, p. 1. The second sense is the ordinary dictionary definition, meaning intellectual advancement. The term here is used primarily in the first sense, though on occasion, depending on the context, it is used in the latter sense also.

ignorance and ill-health, an understanding and appreciation of the cultural barriers to the widespread dissemination of the family planning habit may be of some value.

Before the second World War, when the conscience of the West and other privileged nations was not aroused over the plight of Asian and African countries, mostly colonial areas, it was customary to dismiss them as "backward". This involved a value-judgement and implied that these people, the so-called "natives", were somehow inferior and incapable of rapid advancement. It also provided a much needed justification for western political domination over these areas. Unfortunately, this attitude still persists in some parts of the world.

However, in recent years, the fallacy of this assumption has been exposed, and a more objective term, "underdeveloped", has come to be applied to erstwhile colonial and dependent areas. The peoples of these countries have already demonstrated their ability to manage their own political affairs (so long as bigger nations do not use them as pawns in their power politics) and advance economically as rapidly as circumstances permit. The second World War demonstrated effectively how small and inter-dependent our world has become. The anxious problems of one country have become the real concern of all. Peace, political freedom, economic security, and social progress are becoming one and indivisible. This awareness is at the back of the present global endeavour to help the underdeveloped countries and enable them to reach a standard of living commensurate with that of the rest of the world. Hence the American Point Four, Technical Co-operation Mission, and UN Technical Assistance Programmes, the Colombo Plan, etc.

But a dichotomy of the world into "developed" and "under-developed" areas is rather misleading, for certain economically and technically advanced countries do not possess all the features of a real welfare state. Nor are the poor countries devoid of all the factors of a balanced economy. The concept of under-development therefore poses many questions. Is it merely a matter of proper utilization of human and material resources? Is it a question of imbalance of population and available land and other resources in any given technological level? Is it simply a need to strike a proper balance between agricultural development and

industrialization? Is the material advancement of the people taking place at a pace assimilable and in harmony with their cultural milieu? Are cultural factors a barrier to their economic progress?

Many such questions can be raised. While it is difficult to define precisely the term "underdeveloped area", several criteria may be suggested: income per head of population; the percentage of the gainfully employed population supported by modern industry; food intake per head; or even simply to connote countries which receive economic aid from the United States under the Point Four Technical Assistance Programme. To these economic criteria, cultural criteria can be added.

In reality, paradoxically enough, "underdevelopment" means "over-development" in more than one sense. That is, wasteful, inefficient and improvident utilization of the available resources. Rapid exhaustion of resources is a sign of underdevelopment because it involves "over-development". In terms of population, too many people in relation to land and other resources, particularly non-renewable ones, is also a sign of underdevelopment.

McKim Marriott expresses the paradox as follows: "In any underdeveloped area, too many techniques are too exhaustively applied by too many people to too little land".[77]

Over-population is thus a symbol of unbalanced development. This is true of many regions in Asia, Africa, and Latin America, but nowhere is it so true as in India. The Indian village is a classic example of underdevelopment. To quote McKim Marriott again: "The changes which have occurred had not penetrated very deeply but had gone far enough to double the population of the village in the past century. There is not now a spare square foot of unused land to be found. In the present generation, pastures and forest plots have all been cleared and sown with grain. While I was in the village the last bits of interstitial land—roadways, cremation grounds, shade trees, gravel pits and the like—were leased out for cultivation. This was clearly desperation. Agricultural development has now gone so far that every new organic development is completely extracted from the soil once, twice,

[77] and [78] McKim Marriott, "Technological Change in Over-developed Rural Areas". *Economic Development and Cultural Change* (Chicago, December, 1952), p. 261.

or many times a year. Almost every plant is fully used. Grass and weeds are carefully dug up, roots and all, to be used as animal fodder. Leaves are stripped off the trees repeatedly. The entire land lies absolutely bare and brown for three months in each year; the air, too, is brown, for it is full of the precious soil, dried and blown about as dust. I learned that one family of every ten had been compelled to leave the village in this generation in search of food".[78]

The Desire and Motivation for a Better Life

It is often wrongly assumed that the question of birth control can be settled merely by stating the case for it. This may be the experience in certain advanced countries where education is widespread and where mass media for the dissemination of knowledge is taken for granted. Even in these countries, despite obvious aids, severe battles had to be fought for nearly fifty years before family planning could be made acceptable and respectable. Unfortunately, in the underdeveloped countries where literacy is yet a privilege and where the printed word is not an effective medium for the propagation of ideas, the situation is much more difficult.

But at the outset, there is an even more basic difficulty. The idea of family planning does not enter into the minds of men and women just by itself. They must be aware that such an improvement is possible and in their own lifetime. A better order of things in any realm of human endeavour, including a higher standard of living, presupposes a knowledge that such betterment can be attained by reasonable effort. To be aware of a station in life better than your own you must have either *seen* persons in better circumstances or be able to *imagine* what a fuller and more abundant life would be like. This sounds very simple, for most people have seen others in more desirable circumstances. It might appear that anyone could easily cultivate a "had-I-only-a-university-education-or-a-better-job-or-a-car" attitude, but in actual practice that is not so easy as it seems.

The majority of the people in a country like India have no

[78]See footnote on previous page.

opportunity to travel abroad or, indeed, outside their village or town. Also, they lack the urge to do so and accept, by and large, their lot fatalistically, without question. The presence of abject poverty in the midst of relative plenty never, or at least very seldom, seems to jar on their minds. Yet again, the very poor are not those who demand a better life. It is always those who have had a slight taste of a higher level of living that want more of it.

All our socio-religious-cultural ideologies, through the centuries, have helped to bolster this apathetic attitude because it tends to perpetuate the *status quo*. Certain religious leaders and philosophies have been inclined to associate poverty, and sometimes even ignorance, with spiritual development on the one hand, and a rational education and a high standard of living with a materialistic culture on the other. This attitude in practice tends to justify large populations beyond family or national resources. Hence the earthly relationship of a Dives and Lazarus is taken for granted as divinely ordained, whatever might be their spiritual possibilities in another world. But such a philosophy is not warranted by facts, for those who must work in these countries from dawn to dusk for a mere subsistence have little opportunity or inclination for the development of the spirit. An ailing and hungry body, an illiterate and closed mind, and a miserable hovel cannot foster spiritual development. Of course, there have been slave rebellions, racial and religious minorities agitating for equal treatment, subject countries fighting for political freedom, and ideologies all the way from Fabianism to militant Communism. (There is also a microscopic minority of rare souls who deliberately choose simple living and high thinking). But as we are concerned with the work-a-day millions and not with the few exceptions, mankind, on the whole, has tended to put up with its miseries more often than to rise in revolt.

If people in such countries have become immune to their misery it is not because they love it but because there is no easy alternative. They have had to compromise with and adapt themselves to their hostile environment and hence the particular pattern of agriculture (there are no large scale industries), family structure, magic and medicine, religion, value systems, and ethical codes, etc. The result has been stability and continuity of cultural evolution

at a high cost in terms of human wastage. Had these people been completely isolated from the West, they would have continued to maintain their wasteful demographic balance and remained "happy". But they are no longer isolated, thanks to the revolution made by modern transport. They have had a glimpse of what seems to them in many respects a fuller and better way of life. In the present transitional stage, a certain discontent with traditional values has set in without necessarily creating the conditions for the ready acceptance of the newer values. A cynical American in the Technical Assistance Programme in one of these "backward" countries observed: "The first point of our Point Four Programme is to make the people realize how unhappy they are!" We cannot, of course, impose on people what we think they *ought* to want. Nevertheless, we can take it that these people do not love their poverty.

Aspiration or desire for a higher level of living does not necessarily lead to action, for it implies an ability or capacity to translate the desire into action towards the cherished goal. The strength of the desire for a higher level of living, in terms of individual families, is reflected in their ability to control the size of the family. This ability to limit the size of the family (sometimes called the psychological availability of contraception) is manifested with different degrees of effectiveness in different cultural levels.

Aspiration is one thing and achievement is another. Therefore, the desire to prevent or postpone a pregnancy is not the same as any specific achievement in limiting the family size.

Cultural Communication

Whether communication is strictly a cultural factor or not, it presents a major problem in family planning work.

An overwhelming majority of the people in Asian and African countries are illiterate—literacy being defined as the ability to read and write a post card in one's mother tongue—the illiteracy rates ranging from 60 to 90 per cent. Of the literates, the ratio between males and females is about 3:1. Since family planning is concerned primarily with women, the difficulty with the printed word is obvious. Books, pamphlets, newspaper articles and

advertisements are of relatively little use. Broadcasting is also out of the question because radios are expensive and not even one person in a thousand owns a set. As for communal radios in the villages where large crowds listen to government sponsored programmes at appointed hours, it must be remembered that radio is a government monopoly and no government, with the exception of Japan and India in Asia, is so progressive as to sponsor birth control by this means. The pulpit, in the western sense, does not exist in Asia. Hinduism, Islam, Buddhism, etc., have no central church from which directives for or against birth control can emanate. The only two channels of communication are the cinema and the spoken word. Reliance has to be placed mostly on the spoken word—talks, speeches and lectures.

The importance of communication in a subject like family planning, which is not universally accepted, and which arouses emotional bias, need hardly be emphasized. If the conventional channels are not open, others must be sought. Perhaps some prejudices against family planning are the product of a failure to communicate.

How contraceptive knowledge spread among a people in an underdeveloped area in the western hemisphere—Puerto Rico—is pointed out by Dr Clarence Senior. In Catholic Puerto Rico, the Church claims about 85 per cent membership, and birth rates are high; but some 25 or 30 years ago, sterilization began to be practised by upper class women as a birth control measure. The operation at that time was both hazardous and costly. It filled a need, however. The women wanted to go to confession, but not to have constantly to confess the use of mechanical contraceptives. Sterilization, being one "sin", only one visit to the confessional is necessary to obtain absolution, but the use of contraceptives would entail a constant series of confessions. Gradually the practice of undergoing sterilization began to spread down from the upper class women to the urban working class families. After a clinic up in the mountains had performed a dozen or so sterilizations, it was attacked by the clergy in a pastoral letter. The reading of the letter in rural churches was followed by a wave of inquiries at public health clinics and to private doctors as to the availability of the operation which had been denounced by the bishop! Thus

public advertising to back person-to-person rumour was furnished by the very institution fighting the practice.

A public discussion of sterilization in the spring of 1949 led to another pastoral letter which warned that a sterilized woman would not be admitted to communion, but it added, "unless she has sincerely repented". Thus the Catholic Church seems to have made its adaptation to the requirements of the insular situation.[79] This illuminating account is cited here not to illustrate the Church's tolerant compromise with the pressing "unreligious" needs of its followers, but as a case of ear-to-ear mass communication. However, in most underdeveloped countries, such adventitious aids to disseminating correct contraceptive knowledge are not available.

Family Patterns

In areas where the death rate has not been cut down or controlled effectively, many babies must be born so that a few may survive. The arrival of too many babies is apparently Nature's method of ensuring the survival of the species. While one of the reasons for advocating family planning is to reduce the present inordinate infant and child mortality rates, and to raise the expectation of life at birth, it is doubtful how effective culturally family planning can be in areas where death rates are high. It is now conceded that a purposeful control of mortality unaccompanied by a control of fertility may have disastrous consequences in an underdeveloped economy. But the reverse also may be true in the sense that control of fertility must presuppose or at least go hand in hand with a control of mortality. Unless parents are certain that a few of their children will survive to adult age, an unconscious desire to have more babies will persist. But this consideration, though historically true, is rather irrelevant today, for in all Asian countries death rates are tending to decline considerably faster than birth rates. Japan, Ceylon, and India are good examples.

The relation of the family pattern to the birth rate is obvious. In large, traditional families such as the joint family in India,

[79]Clarence Senior, "An Approach to Research in Overcoming Cultural Barriers to Family Limitation." G. F. Mair (ed) *Studies in Population.* (Princeton University Press, 1949). p. 150.

and the extended family in China, the normal economic deterrent to the arrival of that extra baby does not operate. The resources of the extended biological family are stretched to accommodate the basic needs of the growing family. In such families the young parents do not feel that their children interfere with their personal freedom. They can have their friends in at any time and go out for recreational purposes without the services of a baby-sitter, for a large family comprises aunts and grandmothers who are only too happy to care for the children. Thus an extended family (the Kibbutz in Israel is an extreme example) is a cultural barrier to birth control in the sense that the children do not effectively compete for time with various other activities in which the parents might be interested.

In rural societies, from the communal point of view, the advantages of large families seem to outweigh the disadvantages. Every mouth brings with it a pair of hands. In an urban industrial society, the mouth begins to function automatically, but the hands will have to wait some fifteen to twenty years before they can be productive and make any worthwhile contribution to the family resources. And during the period of waiting parents will have to take care of their children, which means food, clothing, medical care and education. And there are laws which insist on certain minimum needs like schooling between certain ages, prohibition against juvenile employment, etc. But in underdeveloped areas, which are predominantly rural ones, such considerations do not normally operate, for even a six-year-old boy or girl can become a member of the family labour force and help on the farm with any of the innumerable chores of unmechanized agriculture. True, the mouth begins to function immediately, but the hands do not have to wait for fifteen or twenty years. Therefore, children in the rural and agricultural areas have a useful role to play and earn more than their keep. They are not really a burden and hence are welcomed.

Religious Attitudes

Societal attitudes towards mothers and children are conditioned by both the religious values inculcated in the community through the ages, and the role of the mother in and outside the home.

Religious attitudes and practices are only the crystallized do's and don'ts of what the community considered necessary and legitimate at a certain primitive stage of its evolution. But today some of these taboos have outlived their utility and have become anachronisms. The failure to realize this constitutes a serious difficulty. Many Asian and African folk songs sing the praises of the prolific mother and the fertile soil. A barren wife is considered an inauspicious person in all religious and ceremonial functions, even when the sterility may not be her fault. In pre-literate and pre-industrial societies, spinsters, if they existed at all, as well as childless wives, and mothers of daughters, were looked down upon in that order in communities, because infant and child mortality rates were high, labour—meaning sons—was badly needed on the farms, and someone had to take care of the parents in their old age. But the conditions which brought these attitudes into existence are beginning to change, although the attitudes themselves continue to persist. Some thought must be given to change this lag between needs and practices.

Religious attitudes towards family size are equally if not more important in moulding certain patterns of behaviour. There is, of course, religion as taught, that is the scriptures; religion as practised, that is, the gradual and imperceptible deviations in daily practice accepted by the community as the norm; and last, the conscious compromises made with the religious tenets in the face of political oppression, economic pressure or social danger, or self-interest. Religious attitudes operate, therefore, at different levels. They are not fixed entities; they are fluid and flexible.

Generally, every religion considers itself the sole and revealed truth and the only accredited path to salvation. So long as religious communities tend to believe that they are the adherents of the chosen path or that they are the chosen people, religious rivalries are bound to exist. And as long as numbers constitute a criterion for measuring some kind of superiority in our culture, as in a political party-based democracy, and as long as the Lord fights on the side of the biggest battalions and political parties have religious bias or affiliation, the need for one community to outbreed another will continue with religious zeal.

Pre-independent India with its communal (religious) electorates is a classic example. But with a liberal education and an incentive

to economic progress, religious attitudes tend to be modified and become a matter of subjective belief and not objective fact. Hinduism, Buddhism, and for that matter, all great religions, afford numerous examples of the new interpretations, permissive deviations and compromises from original teachings and doctrines to suit modern needs. The compromises are not always sudden or even purposively in keeping with the demands of the complex nature of modern life. But compromises are made, sooner or later, when economic pressure or political insecurity or personal interest threatens to overthrow the very basis of religious belief.

The survival value of all religions is more or less directly proportional to its adaptive ability, whatever might be the assertion of its eternal values. The attitude of the Catholic Church in Puerto Rico, cited earlier, is one example. The Archbishop of York blessing the manufacture of a hydrogen bomb in England is another. Therefore the religious attitudes in underdeveloped countries are not an insuperable barrier to family planning. In fact there is no doctrinal opposition at all. Several attitude surveys in relatively orthodox religious communities in such countries as Japan and Ceylon, as well as Indian surveys already referred to have shown that they are in favour of family planning; and yet any suggestion that they are irreligious would be deeply resented. Poverty and famine, and not the directives, if any, of an ancient religion, have become the decisive factors.

A population policy is primarily an economic policy of balancing a nation's resources with the people's needs. If the assumption that there are too many people in relation to the total available resources in the present technological set-up is granted, birth control must be fostered as an integral part of an overall plan of economic development. Family *planning* implies a *planned* family in a more or less *planned* economy. (There is nowhere in the world a pure capitalist or socialist economy. Those who think that there is only private enterprise in the United States, as some do, simply do not understand the implications of their affluent mixed economy and the quasi-welfare state in which they live). The ends of the family planning movement are bound up inextricably with the economic, social and health planning and progress of a people.

The issue today, fortunately, is not whether we should have family planning or not, but how to make it available to those who

desperately need it. The emphasis has of late shifted to the great need for a simple biological or oral contraceptive. The oral contraceptive "pill" has arrived. But welcome as such simple measures are, from the point of view of an underdeveloped country, they may be like putting the cart before the horse. The availability of a simple, cheap, effective and harmless contraceptive does not necessarily mean that problems of population pressure, mothers' health, or peace will be solved. The availability of a solution does not mean that the problem is always solved. The pill may be perfected and sent by the millions to Asia but the people must *demand* and what is more must *take* it.

The problem of family planning to millions of submerged families in Asia and Africa is not technological but sociological. For instance, vaccination against smallpox has been with us in India for a century, and yet how difficult it is to ensure that *every* baby is vaccinated against this unnecessary scourge. Countless babies escape vaccination and smallpox continues to account for an inordinate share of infantile and childhood mortality. It is incredible how much moral and cultural suasion is needed, besides a law on the statute books.

In conclusion, it is not the want of knowledge in libraries or laboratories, but an awareness of this knowledge and a desire to apply it to human suffering which is the problem. The motivation is all supreme. A purposive and liberal education of the citizen is the basic answer to this question. Once the motivation for a better life is created and the present apathetic and indifferent attitude is changed, the powers that be will have no peace from the citizen who begins to demand that he be treated like a human being.

It is in creating this incentive and motivation and directing these attitudes on healthy lines that cultural factors play a tremendous role. We must bring about a change in culture, not from above but from within, not by coercion but by persuasion, which in turn will demand an economic change. As Sol Tax, the American anthropologist points out:

"The problem of democratically planned culture change is to respect the general cultural bias and the institutions and beliefs held dear by a community of people, at the same time that their level of living is raised and they are given both new

wants and the means to attain them. The economically backward population is to get the benefits of our technology and science, our chemistry and bacteriology without important damage to their values and traditional way of life."[80]

Cultural integration must go hand in hand with economic change; economic change without a cultural response can only be alien and short-lived. Culture change must imply a consent to change. Education alone, in the broadest sense, can create this consent leading to an effective demand for a lasting change. And the creation of this demand is only the beginning in most underdeveloped countries.

[80]Sol Tax, "Selective Culture Change". *American Economic Review* (May, 1951). p. 315.

CHAPTER 8

Birth Control in India Today

A generation ago controversies raged over the question: Was India overpopulated or not? Some years later, the controversy shifted to the question of whether birth control was good or bad. Today, the issue is not whether India wants birth control or not, but what methods would be most effective and acceptable to people in different strata of life and, what is perhaps even more important, how best to disseminate knowledge of them among the people in the villages. This welcome change became apparent in recent years through the reception given to the idea of birth control by the public in general and the pronouncements of leaders and the press.

Despite some misgivings, particularly on the part of the Ministry of Health, the Government of India was not slow to appreciate the changed atmosphere in which the country, and particularly the mothers, were disposed to endorse planned parenthood. The Government requested the World Health Organization in 1951 to provide a planned parenthood expert for the purpose of organizing a "pilot study of the rhythm or safe period method of birth control on the assumption that if this method were to prove successful on a large population basis it would represent a simple method for dealing with family planning in India". The attitude of the Health Ministry that the rhythm method would not go against the traditions, culture and mores of the Indian people was understandable. Besides, it was only reasonable that the Government, to begin with, must advocate a method which was likely to meet with the least resistance from a majority of the population. What is more, in the present order, particularly in the villages, the method had the advantage of costing nothing and involving no genital manipulation.

The importance of these considerations, when dealing with a large, conservative and impoverished population, need hardly be emphasized. Commenting on this question, the Planning

Commission pointed out: "If it can be demonstrated that our people, particularly those living in rural areas, can be educated to accept the rhythm method and use it as a practical method of limiting family growth, Governmental support should be extended to the propagation of this method. From the point of view of avoiding enormous expenditure as well as that of securing the ethical values that community life would gain by the self-imposed restraint which the rhythm method involves it would seem desirable to try out this method fully and thus ascertain its practicability. Whether the rhythm method is capable of wide application in the community with adequate results or not, actual experimentation alone can tell. Research and experiments, need not, however, be confined to a single method."[81]

In view of these considerations, the Ministry of Health informed the World Health Organization that it was "definitely for the moment unwilling to consider any other type of family planning". The late Dr Abraham Stone, of the Planned Parenthood Federation of America, came to India in 1951 as a WHO consultant and helped the Government of India to set up five centres in New Delhi, Mysore state, and West Bengal where several clinical research studies in the rhythm method were carried out. In these centres the rhythm method was taught to selected couples. The follow-up histories of these couples have revealed that the rhythm method of Family Planning is ineffective in India under the present conditions. In any case, it is of interest that India was the first country (with the exception of Japan which has gone to the extent of legalizing abortion) to give official sponsorship to a policy of population control. However, teaching even the rhythm method of birth control to illiterate wives in rural areas had its own problems. Dr Stone, faced with these problems, attempted the method which he describes as follows: "Reliance upon the safe period depends upon fairly accurate records and calculation of the menstrual cycles and of the fertile and infertile days. In the Indian villages the general illiteracy makes the use of the usual means of keeping accurate menstrual records difficult. It was essential, therefore, to develop some simple technique by means of which the village woman could

[81] *The First Five Year Plan* (New Delhi, Planning Commission, 1952), p. 523.

calculate her cycles and keep a record of her fertile and infertile days.

"A woman physician in Delhi pointed out that since beads are often used for counting, perhaps this could be utilized for teaching the women to record the menstrual cycles. At my suggestion the doctor brought me a number of coloured beads from which I constructed a special necklace containing 28 beads, one bead for each day of an average cycle. There are orange beads to indicate the days of the menstrual flow, green beads to indicate the days of the cycle which are safe from conception, and red beads for the fertile days. The beads could be strung for the individual woman on the basis of the duration of her cycles by the physician or health worker, and the woman could then be instructed to move one bead daily from one side of the string to the other, beginning with the first day of her menstrual flow. During the time that the green beads appear she will be in her safe period; but when the red ones come around, sexual relations should be avoided. The beads could be placed on an abacus or strung in some other form. This, of course, was merely a suggestion. It is possible that other methods may be devised which are simple enough for the village woman."[82]

When these bead necklaces were devised no one could have anticipated the numerous snags involved in translating this seemingly simple idea into effective action. First, it was found that the wife could not distinguish the colour of the beads in the night! Therefore, a further improvement was affected in retaining the colour but changing the shape of the beads into round and square ones; round red beads were unsafe while square green ones were safe. Secondly, the beads had to be pushed every day like a tear-off calendar. They had to be mobile in one direction. Hence a necklace with a safety catch which would allow the beads through only in clockwise direction had to be devised. Then it was found that some orthodox women would not touch necklaces or anything during their monthly periods. Some one else had to push the beads during those days!

Even when these psychological and cultural barriers were overcome mechanical difficulties, common to human beings every-

[82]Abraham Stone, "Fertility Problems in India", *Fertility and Sterility* (New York), May-June, 1953.

where, cropped up. Some women simply forgot to push the beads. Some women refused to wear the necklaces because they did not want the whole world to know. Some wives who mistook the beads to be charmed amulets thought it *was enough to push the beads* to space their families.

Besides these, as pointed out earlier, there were the well-known biological difficulties inherent in the very system of the rhythm method. Each individual woman has a different menstrual cycle and therefore each necklace had to be devised to suit individual needs. And finally, when Nature deviates from the statistical norm who can complain?

But these were only experimental projects. The results of these experimental projects on the rhythm method as pointed out earlier, reveal how inadequate it is as an effective method of family planning. There are, of course, some cases where the method has worked. But as the method is not positively successful as a general rule, it cannot be recommended as a reliable answer to either an individual couple's needs or a nation's population pressure.

These pilot projects in the rhythm method of birth control, set up in 1952 under Government auspices, were not, however, the first steps taken in India in this direction. Actually today, there are more than 1,500 birth control clinics of the modern western type located in various cities, towns and rural areas in India. Madras city was the pioneer during the 'thirties when both propaganda and clinical work were vigorously carried on by the Madras-Neo-Malthusian League. As for a government-sponsored birth control clinic, the earliest one was opened in 1930 in Bangalore city by the progressive Mysore government. Bombay and Poona followed suit. And since 1950, birth control clinics of one kind or another, under official or private auspices have begun to function in all the major towns and cities of India. A majority of these are sponsored by the municipal administration and local authorities and are located in the gynaecological departments of general hospitals. Recently some have been opened under Red Cross auspices while others are independent birth control clinics like those in Europe and America. Today, in Bombay city alone there are more than twenty birth control clinics operated by the Bombay municipal corporation in Greater

Bombay in conjunction with municipal maternity homes and hospitals. Besides these, the medical services of the Army and the Air Force have their own birth control clinics as part of their respective medical units.

Two obvious conclusions emerge from this brief and necessarily incomplete survey. India—rural as well as urban—has become aware that large families and population growth constitute a problem and jeopardize the realization of a better level of living in terms of health and wealth. Moreover, this awareness has induced a perceptible change in individual and group attitudes and motivations in favour of planned parenthood.

Now that there is this awareness of the problematic nature of family size and a motivation in favour of controlling it, a method that is simple and effective, harmless and acceptable must be provided. Fertility decline is not an overnight process; it is at best an end result of a slow, silent social revolution. And once such a revolution has begun—as indeed it has in India, it can be accelerated by governmental and other forces that are culturally constructive, morally acceptable and socially purposeful.

Human Conservation

In conclusion, the protection and promotion of the interests of the people who comprise a nation are the true ends of civilized and organized national life. Natural resources, economic systems, social institutions, cultural patterns and all forms of co-operative endeavour are valuable only in so far as they contribute to the welfare of every citizen. The conservation of human resources is therefore a matter of primary and fundamental importance.

If we, as a nation, are to progress towards abiding, civilized values, we should dedicate ourselves to the cause of conservation of human life and personality as a major social objective of a democratic society. In our country, human life, from conception to death, is subjected to needless, preventible and incalculable misery, suffering and unhappiness. It is difficult to comprehend the tragic loss, due to illness, injuries, impairments and premature death, and the enormous economic cost of this loss and wastage, to society. Every day, we witness the anguish and agony of sudden loss, protracted pain, maimed bodies, warped minds and mal-

adjusted personalities from conception through infancy, from childhood and adolescence into old age and senescence. Though the causes, conditions and consequences of such human erosion and loss are extremely complex, they can be conquered with the aid of science and all the knowledge it has yielded us.

There are unnecessary and disproportionately large pre-natal losses, still and premature births, permanent maternal disability and deaths. Then there are infant deaths. And those who survive the first year or two have to undergo a catalogue of childhood ailments and privations often resulting in disabilities and handicaps, delinquency and crime. Those who survive the adolescent years have to face another set of adult diseases arising from want of public sanitation and hygiene, hunger and squalor, and inadequate preventive and curative medicine. And, above all, there is the short expectation of life, which means that life is ended when it has just begun to be useful.

Why do we waste human life on such a tragic scale in our country?—one might ask. We have become so accustomed to pain and poverty, disease and death, that we have become almost complacent. We are so saturated with the misery and degradation around us that we cannot even imagine that life could be different and better for *everyone* of us. We have so much of useless and unwanted human life around us that we have neither respect nor value for it. We can raise the quality of our people only by controlling the quantity under the present socio-economic conditions.

Here is a challenge to everyone of us to change this sordid order. After all, human conservation is an invitation to think and act as the custodians of the precious heritage of human life and fertility, now entrusted to our care to be handed down in our turn, unimpaired and if possible enriched, to countless generations yet unborn.

Statistical Appendices

APPENDIX 1

AREA, POPULATION, CAPITALS OF AND DENSITY OF POPULATION IN INDIA AND THE COMPONENT STATES AND UNION TERRITORIES

	Area in sq. miles (a)	*Population*	*Density of population*	*Capital*
INDIA	1,259,797	361,151,669	287(*b*)	New Delhi
States				
Andhra Pradesh	106,052	31,260,133	295	Hyderabad
Assam(*c*)	84,899	9,043,707	106	Shillong
Bihar	67,198	38,783,778	577	Patna
Gujarat	72,137	16,262,135		Ahmedabad
Jammu & Kashmir(*c*)	86,024	4,410,000	51	Srinagar
Kerala	15,003	13,549,118	903	Trivandrum
Madhya Pradesh	171,210	26,017,637	152	Bhopal
Maharashtra	118,903	31,168,718		Bombay
Madras	50,132	29,974,936	598	Madras
Mysore	74,122	19,401,193	262	Bangalore
Orissa	60,162	14,645,946	243	Bhubaneswar
Punjab	47,084	16,134,890	343	Chandigarh
Rajasthan	132,150	15,970,774	121	Jaipur
Uttar Pradesh	113,452	63,215,742	557	Lucknow
West Bengal	33,928	26,302,386	775	Calcutta
Union Territories				
Andaman & Nicobar Islands	3,215	30,971	10	
Delhi	573	1,744,072	3,044	
Himachal Pradesh	10,880	1,109,466	102	
Laccadive, Minicoy & Amindivi Islands	11	21,035	1,912	
Manipur	8,628	577,635	67	
Tripura	4,036	639,029	158	

(*a*) Revised on the basis of figures (rounded off to the nearest unit) furnished by the Survey of India in May, 1959. These are still provisional pending final survey of boundaries of States and Union Territories.

(*b*) In working out the density of population in India the area and population of Sikkim have been taken into account.

(*c*) The State of Jammu and Kashmir and Part B Tribal Areas of Assam were not included in the 1951 census. The 1941 census population of Jammu and Kashmir was 40·2 lakhs and the statutory estimates of the Registrar-General as on March 1, 1950 and 1951 were 4·37 and 4·41 millions respectively. A local estimate of the population of Part B Tribal Areas of Assam (32,289 sq. miles) is 560,631.

APPENDIX 2

INDIA'S (CRUDE) BIRTH, DEATH AND INFANT MORTALITY RATES 1911-1951*a*

Year	*Birth-rate*	*Death-rate*	*Infant Mortality rate*
1911	38·8	32·3	205
12	39·2	29·8	208
13	39·5	28·8	195
14	39·6	30·2	212
15	37·7	29·9	202
1916	37·0	29·2	202
17	39·1	32·9	265
18	35·1	63·1	267
19	30·0	35·8	224
20	32·8	30·8	195
1921	32·1	31·0	198
22	31·6	23·9	175
23	34·7	24·7	176
24	33·8	28·0	189
25	32·8	24·1	174
1926	33·5	25·8	189
27	33·8	23·7	167
28	34·9	24·1	173
29	33·3	24·2	178
30	34·8	24·9	181
1931	34·8	25·3	179
32	33·9	21·8	169
33	35·7	22·5	171
34	33·7	25·0	187
35	34·7	23·6	164
1936	35·2	22·5	162
37	34·0	22·1	162
38	33·6	23·9	167
39	33·0	21·7	156
40	32·0	21·3	160
1941	32·2	21·8	158
42	29·5	21·3	163
43	26·1	23·6	165
44	25·8	24·1	169
45	27·9	21·5	151

Year	*Birth-rate*	*Death-rate*	*Infant Mortality rate*
1946*b*	28·8	18·7	136*c*
47*d*	26·4	19·7	146
48*e*	25·2	17·1	130
49	26·4	15·8	123
50	24·8	16·0	127
1951	24·9	14·4	116
52	25·4	13·8	116
53	24·8	13·0	118
54	24·4	12·5	109
55*f*	27·0	11·7	102
56*f*	21·6	9·8	98
1957*f*	21·5	11·0	98

a. It is possible that comparability of these annual rates may be adversely affected by different degrees of reliability of the population figures used in the calculation of these mortality rates. Secondly, there is the question of the validity of comparing the three parts of the time series—the period before 1921 related to a scattered and growing registration area, the period 1921-46 relating to the former provinces of British India, and the period since 1947 relating to the registration area of the Indian Republic, that is, British Provinces minus Pakistan and plus Native States.

b. Until 1946 the registration area comprised the British Provinces in undivided India excluding the Native States.

c. Excluding East Bengal for which area figures are not available.

d. Partition of the country into India and Pakistan.

e. For 1948 and subsequent years the figures are for the States (provinces) of the Indian Union as reconstituted after partition.
Registration throughout is officially stated to be incomplete. This is also true of the present States of the Indian Union.

f. Incomplete registration figures.

APPENDIX 3

CITIES WITH A POPULATION OF 100,000 AND OVER ACCORDING TO THE 1951 CENSUS IN THE REORGANIZED STATES.

City	1951 *population*	*Females per* 1,000 *males* (1951)
ANDHRA PRADESH STATE		
1. Hyderabad	1,085,722	989
2. Vijayawada	161,198	957
3. Warrangal	133,130	954
4. Guntur	125,255	987
5. Visakhapatnam	108,042	978
6. Rajahmundry	105,276	1,024
BIHAR STATE		
1. Patna	283,479	822
2. Jamshedpur	218,162	802
3. Gaya	133,700	854
4. Bhagalpur	114,530	831
5. Ranchi	106,849	830
GUJERAT STATE		
1. Ahmedabad	788,333	765
2. Surat	233,182	917
3. Baroda	211,407	862
4. Bhavnagar	137,951	924
5. Rajkot	132,469	964
6. Jamnagar	104,419	942
KERALA STATE		
1. Trivandrum	186,931	955
2. Kozhikode	158,724	982
3. Alleppey	116,278	950
MADHYA PRADESH STATE		
1. Indore	310,859	854
2. Jabalpur	256,998	833
3. Gwalior	241,577	898
4. Ujjain	129,817	888
5. Bhopal	102,333	894
MADRAS STATE		
1. Madras	1,416,056	921
2. Madurai	361,781	967
3. Tiruchirapalli	218,921	957
4. Salem	202,335	975
5. Coimbatore	197,755	890
6. Vellore	106,024	1,002
7. Tanjore	100,680	1,012

City	1951 *Population*	*Females per* 1,000 *males* (1951)
MAHARASHTRA STATE		
1. Bombay	2,839,270	596
2. Poona	480,982	865
3. Nagpur	449,099	919
4. Sholapur	266,050	916
5. Kolhapur	136,835	918
6. Hubli	129,609	930
MYSORE STATE		
1. Bangalore	778,977	883
2. Karwar	517,780	
3. Mysore	244,323	947
4. Kolar Gold Fields	159,084	1,004
5. Mangalore	117,780	992
ORISSA STATE		
1. Cuttack	102,505	755
PUNJAB STATE		
1. Amritsar	325,749	762
2. Jullundur	168,816	853
3. Ludhiana	153,795	835
RAJASTHAN STATE		
1. Jaipur	291,130	895
2. Ajmer	196,633	900
3. Jodhpur	180,717	875
4. Bikaner	117,113	935
UTTAR PRADESH STATE		
1. Kanpur	705,383	699
2. Lucknow	496,861	783
3. Agra	375,665	820
4. Banaras	355,777	811
5. Allahabad	332,295	795
6. Meerut	233,183	752
7. Bareilly	208,083	844
8. Moradabad	161,854	840
9. Saharanpur	148,435	805
10. Dehra Dun	144,216	709
11. Aligarh	141,618	812
12. Rampur	134,277	938
13. Gorakhpur	132,436	777
14. Jhansi	127,365	858
15. Mathura	105,773	813
16. Shahjahanpur	104,835	855

City	1951 *Population*	*Females per* 1,000 *males* (1951)
WEST BENGAL STATE		
1. Calcutta	2,548,677	570
2. Hawrah	433,630	616
3. Tollygunj	149,817	870
4. Bhatpara	134,916	533
5. Kharagpur	129,636	909
6. Garden Reach	109,160	648
7. Behala	104,055	

APPENDIX 4

OCCUPATIONAL DISTRIBUTION OF INDIA'S POPULATION (IN MILLIONS) 1951.

Occupations	*Self-supporting*	*Non-earning dependents*	*Earning dependents*	*Total*	*% of total population*
1. Cultivators of land wholly or mainly owned	45·7	100·1	21·5	167·3	46·9
2. Cultivators of land wholly or mainly unowned	8·8	18·9	3·9	31·6	8·8
3. Cultivating labourers	14·9	24·7	5·2	44·8	12·6
4. Non-cultivating owners of land and rent receivers	1·6	3·3	0·4	5·3	1·5
Total: Agricultural classes	71·0	147·0	31·0	249·0	69·8
5. Production other than cultivation (industries)	12·2	22·3	3·2	37·7	10·5
6. Commerce	5·9	14·5	0·9	21·3	6·0
7. Transport	1·7	3·7	0·2	5·6	1·6
8. Other services such as health, education, public administration and miscellaneous	13·6	26·8	2·6	43·0	12·1
Non-Agricultural classes: Total	33·4	67·3	6·9	107·6	30·2
General Population Total	104·4	214·3	37·9	356·6	100·0

APPENDIX 5

RELIGIOUS COMPOSITION OF INDIA'S POPULATION (1951).

Community	*Total Number (in millions)*	*Percentage*
Hindus	307·1	84·99
Muslims	35·9	9·93
Christians (Protestants and Catholics)	8·3	2·30
Sikhs	6·3	1·74
Buddhists	0·22	0·06
Jains	1·6	0·45
Parsees	0·11	0·03
Tribal Religions	1·7	0·47
Non-Tribal Religions	0·11	0·03

APPENDIX 6

RURAL AND URBAN POPULATION (1872-1951).

Census Year	*Percentage of Total Population*	
	Rural	*Urban*
1872	91·3	8·7
1881	90·6	9·4
1891	90·5	9·5
1901	90·2	9·8
1911	90·6	9·4
1921	88·6	11·4
1931	87·9	12·1
1941	86·1	13·9
1951	82·7	17·3

APPENDIX 7

DISTRIBUTION OF POPULATION ACCORDING TO AGE, SEX AND CIVIL CONDITION*, 1951

(in thousands)

Age Group	*Total*		*Unmarried*		*Married*		*Widowed or divorced*	
	Male	*Female*	*Male*	*Female*	*Male*	*Female*	*Male*	*Female*
Below 1 year	5,821	5,668	5,821	5,668	—	—	—	—
1- 4 years	17,939	17,908	17,939	17,908	—	—	—	—
5-14 ,,	44,703	41,989	41,804	35,737	2,833	6,118	66	134
15-24 ,,	30,672	30,052	16,628	5,184	13,660	24,041	384	827
25-34 ,,	27,875	26,633	3,701	773	23,122	23,731	1,052	2,129
35-44 ,,	22,032	19,529	1,150	304	19,323	15,346	1,559	3,879
45-54 ,,	15,719	13,898	604	173	13,077	8,313	2,038	5,412
55-64 ,,	9,065	8,624	229	89	6,777	3,334	1,989	5,201
65-74 ,,	3,867	3,976	104	37	2,533	1,092	1,230	2,847
75 and over	1,630	1,756	46	18	883	371	701	1,367
Age not stated	111	117	51	60	45	42	15	15
Total	179,434	170,150	88,147	65,951	82,253	82,388	9,034	21,811

*Excluding displaced persons. Figures have been rounded off to nearest thousand.

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The author is Director of the Indian Institute for Population Studies in Madras.

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